

Administration of Bengal
1891-92

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ADMINISTRATION OF BENGAL, 1891-92.

SUMMARY.

CHANGES OF ADMINISTRATION.

1. Sir Charles Alfred Elliott held the post of Lieutenant-Governor throughout the year. Sir John Edgar, K.C.I.E., C.S.I., who had been Chief Secretary to Government since the 24th August 1887, became a Member of the Legislative Council of His Excellency the Viceroy and Governor-General in December 1891, and took furlough to Europe in April 1892, shortly after which he resigned the service. He was succeeded as Chief Secretary by Mr. H. J. S. Cotton, C.S.I. Mr. Nolan, Revenue Secretary, went on leave in March 1891; Mr. Cotton, Financial Secretary, in April 1891, and were succeeded by Mr. C. E. Buckland and Mr. H. H. Risley. The Members of the Board of Revenue were Sir H. Harrison throughout the year, and Mr. F. M. Halliday till December 1891, when he resigned the service, and his place was taken, first by Mr. A. Smith and subsequently by Mr. C. C. Stevens. Among Commissioners the chief losses sustained by the public service were those of Mr. Boxwell by death, and of Mr. E. E. Lewis by retirement. Their places were filled by Messrs. Veasey and Nolan.

2. The Bengal Government spent from 2nd May to 1st July and again from 29th August to 26th October at Darjeeling, during which time the Lieutenant-Governor paid a visit to the garrison at Gnatong and the Jelapla Pass into Thibet. For the rest of the year the head-quarters of Government were in Calcutta. Sir Charles Elliott made several short tours in the Province during the year. The first, from 30th March to 13th April, took him to Jalpaiguri, Purnea, and Naya Dumka, at each of which places the chief business was to examine the progress of the settlement. In the rains he made a long water-tour on the *Rhodus*, visiting the head-quarters of the Hooghly, Murshidabad, Malda, Rajshahi, Pabna, Faridpur, Mymensingh, Backergunge, Khulna, and Jessore districts and such subdivisional stations as fell in the way. In October, on leaving Darjeeling, the Lieutenant-Governor travelled to Bankipore and visited all the seven districts of the Patna Division. The object of this tour was principally to make preparation for the cadastral survey, orders for which had then been received; and to enquire into the state of the crops and the prospects of famine, as to the imminence of which considerable alarm existed. In the winter the Lieutenant-Governor paid a visit of three days to Burdwan, where the difficulty of collecting the road cess had attracted attention, and

then made nearly a month's tour in Orissa, where the progress of the settlement was the chief subject of enquiry. In the end of March, distress of a severe type having declared itself in some of the districts north of the Ganges, an expedition was made through the districts of Purnea, Bhagalpur, and Monghyr, during which the relief works were visited and the distribution of gratuitous relief inspected.

3. The subdivision of Palamau, which had hitherto been a portion of the Lohardaga district, was, with the addition of
Changes in jurisdiction. pargana Tori, constituted into a separate district with effect from the 1st November 1891. The subdivisions of Chuadanga in Nadia and Lalbagh in Murshidabad were abolished with effect from the 1st April 1892 and 1st July 1892, respectively. The new district of Angul and the Khondmals was sanctioned from the 16th December 1891, and the district of the Chittagong Hill Tracts was reduced to a subdivision and placed directly under the Commissioner on the 1st November 1891. For a period of three months an additional Commissionership was sanctioned for the Patna Division in order to clear off the arrears of work. With the sanction of the Secretary of State, the Commissioners of all the Divisions of Bengal have now been placed on the same footing in regard to their salaries and emoluments, and a reduction corresponding to the increase in expenditure involved has been made in the pay of the Secretaries to Government. Other administrative departmental changes are noticed under their appropriate headings.

4. As the result of the examination for the Subordinate Executive
Examinations for appointments as Deputy and Sub-Deputy Collectors. Service held in 1891, 16 gentlemen were selected to be Probationary Deputy Collectors, 3 were appointed to be Temporary Sub-Deputy Collectors, and 8 were appointed to be Probationary Sub-Deputy Collectors. The 16 Probationary Deputy Collectors have in due course been appointed to be Officiating Deputy Magistrates and Deputy Collectors, and similarly the 8 Probationary Sub-Deputy Collectors have been absorbed as substantive *pro tempore* Sub-Deputy Collectors in the fourth grade. The Lieutenant-Governor is glad to say that the report furnished by their official superiors of the working of these probationary officers has been uniformly satisfactory. Another examination was held in March 1892, at which 190 competitors, all of whom except 5 were graduates of the Calcutta University, appeared. Of the successful candidates 5 were appointed Officiating Deputy Collectors, 20 Probationary Deputy Collectors, and 10 Probationary Sub-Deputy Collectors. In connection with the appointment of Officiating Deputy Collectors, the Lieutenant-Governor has decided that the claims of the Special Deputy Collectors who are appointed to specific temporary work should receive the first consideration. These officers are now always carefully chosen from among the grades of Sub-Deputy Collectors, and although the work done by them is in theory of a temporary nature, experience has shown that there is enough of it to furnish continuous employment for a considerable number of officers. When included in the regular *cadre* of the Subordinate Executive Service, these officers will not be indefinitely detained on special duty, but will be transferred to general employment as soon as possible: until, however, they can be so transferred, they will be seconded.

Since the close of the year new rules have been framed regarding the admission of Special Deputy Collectors and Sub-Deputy Collectors to the departmental examinations, and it is contemplated that in future Sub-Deputy

Collectors will be employed more largely than they are at present on criminal work. They are now admitted into the service by the same examination as that which has been prescribed for admission into the Provincial service, and the result of the late examinations has been to supply the ranks of Sub-Deputy Collectors with highly qualified graduates from the Calcutta University, between whom and the successful candidates for the Provincial service the smallest possible difference exists. The necessity of their exercising criminal powers is now admitted on all hands, and their services are fully recognised by the Lieutenant-Governor as forming a valuable adjunct to the judicial administration of the country.

POLITICAL.

5. The Raja of Sikkim was given permission to reside during the rains at
Sikkim.
either Tumlong, Guntok, or Robdenchi. He chose the latter place, and went there in February 1891.

In October the Council requested him to return to Guntok, but he refused. The Lieutenant-Governor then issued orders that it was expected of him that he would immediately return to Guntok, and also that his son should be brought for education from Tibet. It was added that if the Raja should not comply with these demands, all pecuniary allowances would be stopped, and that in the last resort measures should be taken to bring him to Guntok. The Raja took no notice of these orders, and in January 1892 the Assistant Political Agent visited Robdenchi and did his best to induce him to come into Guntok. In March the Raja left Robdenchi ostensibly for his return to Guntok, but in effect he endeavoured to find his way into Tibet *via* Nepal: he was arrested as soon as he crossed the border by the Nepalese authorities, who placed themselves in communication with the Government of India, and eventually escorted the Raja to the Darjeeling district, where he is now detained. These events belong properly to the history of the present year. During no period of the past year did the Raja take any part in the administration of the affairs of the State, which were conducted by the Assistant Political Agent and the Council, who have acted together in complete agreement. Perfect quiet prevailed throughout the year in Sikkim, and the revenue administration, during the three years which have elapsed since Mr. White's appointment, has been most satisfactory.

6. The relations of the Bengal Government with Bhutan have on the
Bhutan.
whole been friendly. The rumour of hostile intentions at one time prevalent appears to have been entirely without foundation. No further trouble is expected in the matter of the boundary between Bhutan and the Western Duars. The policy adopted has been to relay the old boundary line exactly, and no difficulty has arisen with the Bhutan Government in carrying out the orders passed. No measures were taken to elect a Deb Raja during the year. The Tongsa Penlow still holds the seals of office, and is chief in name as well as in fact, and the authority of his government is reported to be as strong and stable as any which has ever held power in Bhutan.

7. The financial returns of the Kuch Bihar State show a surplus of more
Kuch Bihar State.
than a lakh of rupees of income over expenditure. It is highly necessary in the interests of the State, against which large accounts are still outstanding and which has lately incurred

a loan of eight lakhs of rupees from Government for the construction of a railway from Gitalda to Kuch Bihar, that a policy of retrenchment and economy should be continued. Certain important reforms have been introduced in the administration, and the Lieutenant-Governor notices with satisfaction that they include arrangements for the regular and thorough inspection of the courts and offices. Mr. E. E. Lewis, formerly of the Indian Civil Service, took over charge of the office of the Superintendent of the State and Vice-President of the State Council in December last.

8. The administration of the Hill Tippera State was successful financially, and the liquidation of debts engaged the careful attention of the administration. During the

Hill Tippera.

two years the State has been under the charge of Rai Umakanto Das Bahadur, the debts have been reduced from Rs. 10,50,569 to Rs. 5,59,611. The Lieutenant-Governor has been very glad to support the decision of the Maharaja to have a survey and record of rights made of his zamindari in British territory, and he has assured His Highness that every assistance will be afforded by the Bengal Government in furtherance of this work. The important administrative changes which have recently been sanctioned, involving the appointment of Mr. McMin, late of the Indian Civil Service, to be in charge of His Highness' zamindari, the abolition of the office of Minister of the Hill Tippera State, and the delegation of authority to the Jubraj and Bara Thakur, the two elder sons of the Maharaja, are events which fall within the history of the current year.

9. During the past year the estates of Angul and the Khondmala were united with British territory and formed into a separate district in charge of an officer under the immediate supervision of the Superintendent of the

Tributary States of Orissa and Chota Nagpur.

Tributary Mahals. The settlement of Angul was concluded, and the gross revenue increased from Rs. 45,936 to Rs. 92,934: the increase will, however, be realised not at once, but by gradual increments.

10. The most important event of the year in the Orissa Tributary States was the insurrection of the Bhuyas of Keonjhar against their Maharaja, resulting in his flight to

Keonjhar.

Cuttack and final restoration accompanied by Rai Nanda Kishore Das Bahadur as Government Agent. The oppressions and exactions of the Maharaja were the immediate cause of the disturbances, which were promptly suppressed by the local officers with the aid of the Government police. A detachment of troops from Calcutta was also ordered under arms, but it was only held in reserve and not called into action. Although all active resistance on the part of the insurgents appears to have now ceased, and the Maharaja has been duly restored, the Bhuyas, in spite of the efforts of the Government Agent towards reconciling them, still hold aloof, and will neither pay the revenue due from them, nor allow the payment of revenue by those under their influence. A proclamation has recently been issued warning them of the serious consequences of continued contumacy, and if this warning is neglected, they will during the coming cold weather be reduced to submission by force, and their ringleaders, if necessary, deported.

11. The States of Chota Nagpur are extremely backward compared with those of Orissa in almost every particular. With a greater area they contain only half the population and have only one-sixth the revenue of the Orissa

The Orissa States compared with the Chota Nagpur States.

States. While every one of the Orissa States has a well-attended dispensary at its head-quarters, there is in the Chota Nagpur States only one dispensary, and that was closed for ten months of the year. While the Orissa States maintained 1,207 schools with 15,628 pupils and expended Rs. 53,569 on education, those of Chota Nagpur maintained only 39 schools, with an attendance of 963 and at a cost of Rs. 3,942. The Orissa States, according to the figures available, contain 642 miles of prepared roads, while the Chota Nagpur States have only 250, and the expenditure on roads and public works in the Orissa and Chota Nagpur States is very nearly as 20 to 1. Sir Charles Elliott has strongly insisted on the necessity of devoting a liberal expenditure to permanent improvements in States which are under Government management.

12. The Lieutenant-Governor has observed that on the whole there seems to be little to find fault with in the administration of these Tributary States: if the people suffer from occasional acts of tyranny, and if the Chiefs do not always realise that their interests are identical with those of their subjects, there are many compensations in the way of low rents and jungle and other rights which are not enjoyed in British territory. Instances of grave oppression are probably very rare, and an oppressed raiyat can always emigrate from a badly to a well-governed State. Too great interference is not desirable in the interests of the people themselves. In regard to the estates which are under Government management, His Honour entirely agrees with the opinion which has been expressed, that the proper course is to employ, and as far as possible to improve on, indigenous methods, and not to introduce Western principles of procedure which it is impossible for any Chief to adhere to when he takes the control of his own affairs.

13. One of the most important steps to be taken in consequence of the definite settlement of the question that these Tributary States are not within British India, is the issue of new sanads to the Chiefs to acquaint them with the position assigned to them, and to inform them of the duties and powers of the British officers connected with them, and the Lieutenant-Governor has accordingly suggested forms of sanads which should in future be given in all cases.

14. The position of Porahat in Singhbhum is peculiar. It was formerly a Tributary State, but was confiscated by Government after the Mutiny, and up to the past year was never incorporated into the Lieutenant-Governorship of Bengal. A declaration has now been published under 28 and 29 Vic., Chapter 17, section 4, incorporating Porahat in the Bengal Presidency, and an Act has also been framed assimilating the law in force there to that in force in the Kolhan, validating all acts done therein since the year 1858, and declaring Porahat to form part of the Singhbhum district and the Chota Nagpur Division.

15. The leading events of the year along the Eastern Frontier of Bengal were the punishment of Jakopa and subjugation of the Molienpui tribe in May 1891, the meeting of Captain Shakespear with Mr. McCabe at Kairuma and the settlement of the boundary between the North and South Lushai Hills, the capture and deposition of the Shendoo Chief Dokola in February, and above all the serious disturbances which occurred along the northern frontier of Captain Shakespear's charge during March and April.

In the beginning of March Captain Shakespear heard of the attack on Mr. McCabe at Lalbura's, and marched northwards to assist or relieve him. He was, however, able to get no further north than Vansanga, when the whole country rose in arms, and after many skirmishes with the enemy he was compelled to entrench himself in Vansanga's village. There he kept all the hostile Chiefs fully employed, and so prevented them from joining in the combination which was harassing the Aijal force; but he was not able to cross the frontier or to return without a loss of prestige which would have been fatal to the security of the British power in these hills. Meanwhile the enemy constantly attacked Vansanga's, attempted Lungleh itself, and spread themselves over the lines of communication, threatening Demagri, attacking the forts at Tuichang and Lalthuama in force, cutting the telegraph wires, destroying ferries and bridges, and occasionally shooting or cutting up transport followers and less often sepoys on the roads. At this period co-operation from Burmah was afforded, and a column with Mr. Carey as Political Officer and Captain Rose in command marched from Fort White and effected a junction with Captain Shakespear. The combined forces then did all in their power to render the punishment they could inflict as effective as possible. Owing to the want of provisions occasioned by difficulties of transport they had only five days at their disposal, but in this time they punished several villages, and the country was reduced to quiet and temporary submission. It is reported that the Lushais were temporarily cowed by the sudden and unexpected appearance of reinforcements from the Burmah side. The column which had thus rendered such valuable service marched on to Lungleh, and then to Chittagong, where arrangements were made for their return to Rangoon.

With the departure of the Burmah Column the active operations of the season closed. The hardships of the campaign, due to the unfavourable weather, the sickness among the troops, the want of roads, the distances to be traversed, and the difficulties of transport, were excessive, and in the face of all these adverse conditions the attitude of both officers and men appears to deserve high commendation.

16. The three great heads of administration in the Lushai Hills relate to Tribute, Labour, and Disarmament. It is necessary

First steps to administration in Lushai Hills.

to enforce the regular payment of tribute as the first step towards the domination of the country, and under this head the action taken during the year was satisfactory. This tribute is ordinarily levied in rice, because every maund of rice paid into the Government posts in these hills lessens the cost of administration: the cost of the carriage of a maund of rice from Chittagong to Fort Tregear being nearly ten times its value in the plains. In regard to labour, Captain Shakespear was not able to do so much as in the matter of tribute, and he reports that the question of enforced labour was at the root of the recent rising. The Lieutenant-Governor concurs in thinking that it is absolutely necessary to insist on each Chief supplying a certain number of coolies every year as a token of submission, but that these men should be paid, except when labour is to be exacted as a punishment. Regarding disarmament, little or nothing was done during the past year; but this is probably the question which, above all others, is now of the most urgent importance for the welfare and peaceful settlement of the country.

17. In January last a Conference, of which the Lieutenant-Governor was a member, met at Calcutta to examine various questions relating to the country of the Lushai tribes. The Lieutenant-Governor then strongly supported the proposal that the whole of this tract of country should be brought under one Administration and preferably that of Assam, and it has since been decided by the Government of India that the South Lushai Hills should be transferred from Bengal to Assam as soon as possible. It has also been decided that the Chittagong district should be transferred from Bengal to Assam as soon as the settlement operations now in progress have been brought to an end, and that if it is found that there are difficulties in the way of an immediate transfer of the entire district, the subdivision of the Chittagong Hill Tracts should be transferred in advance of the rest. The transfer of the whole of the Chittagong Division to Assam is, moreover, in contemplation.

18. The Chittagong Hill Tracts were constituted a subdivision with effect from the 1st November 1891. The administration of this territory was uneventful during the year, and the only important orders which call for remark relate to the enforcement of rules which were framed in continuation of those under which the administration was originally constituted. Although it had been laid down by Sir Richard Temple as long ago as 1876 that the jurisdiction of the local Chiefs must be regulated by local boundaries, and not by tribal distinctions, the latter principle was still followed in practice, and it was not until last February that simple, clear rules were enunciated that all hillmen were to be subject to the jurisdiction of the Chief within whose territory they reside or cultivate. Local limits have now been defined for each headman, dewan, and superior Chief, and advantage has been taken of this system to regulate and develop the land revenue of the hills. The old rules for plough cultivation have been cancelled, and in future any suitable person wishing to open plough cultivation will be permitted to do so.

PROTECTION.

POLICE AND CRIMINAL JUSTICE.

19. An examination into the statistics of crime cognizable by the police during the ten years from 1878 to 1888, which was undertaken more than two years ago at the instance of the Government of India, showed conclusively that, although crime generally was not great in Bengal and was decreasing relatively to the increase of population, certain crimes evinced a tendency to increase; that an unduly large proportion of the crime actually occurring was not brought to the notice of the police or of the Magistrates, and was therefore never enquired into; that the police enquiry into a large number of the cases taken up was fruitless, such cases never coming before the courts; and that a disproportionate number of the persons brought before the courts was acquitted. After the fullest investigation, it was then decided that a Committee should be appointed to enquire minutely into the imperfections which had been brought to notice, and to ascertain what remedies could be applied. This Committee submitted its report on the 26th February 1891, and during the past year active measures have been taken to improve the several departments of the administration affected by its recommendations.

20. In respect of the village police, a Bill has been passed through the Legislative Council, which takes a step in the direction

The village police.

of centralising police administration and of bringing the village watch into closer relations with the District Magistrate. At present the local village panchayet not only appoints the chaukidars, but has authority under the law to decide within specified limits how many chaukidars shall be employed and to fix their salaries. Under the new law, the panchayet nominates, but the appointment of the village watch rests with the District Magistrate. It is also provided that the Magistrate and not the panchayet shall determine the number of chaukidars and fix their salaries. This Bill to amend the law relating to the village police has received the assent of the Governor-General, and become law since the close of the year.

In other provinces the status of the rural police has been raised by similar legislation, and it is hoped that a like result will now be attained in Bengal. The special attention of all District Magistrates has been drawn to the necessity of trying to raise the social status of the chaukidars by refusing to appoint men of the low castes and thieving habits who have hitherto been employed, and substituting for them men of better caste and more respectable position. It has also been pointed out that one of the causes which has done much to degrade the village chaukidar in his own esteem and that of the public, and to lessen his influence for good, has been the habit, too common among the Provincial police, of treating him as a beast of burden and a menial servant; and Magistrates and District Superintendents of Police have been instructed to set their faces sternly against this practice. When the chaukidar recognises that he is a servant of the State and bears a sanad of appointment under the Magistrate's hand and seal, it may be expected that he himself will refuse to submit to ill-treatment, and that the inferior police officers will understand that his status has been so raised that menial employment must not be thought of in connection with him.

21. Preparatory to any improvement in the constitution of the regular police, a redistribution of their numbers appeared

The regular police.

to be necessary, and for this purpose the Lieutenant-Governor appointed a separate Committee, which entered on its duties in December last. It was laid down as a principle for the guidance of the Committee that no officers inferior in rank to Sub-Inspectors were ordinarily to be employed in the investigation of criminal cases, and that head-constables, whose number would be greatly reduced, should be confined to work of a less responsible nature. Subject to this instruction, the orders communicated to the Committee were briefly—(1) to work out for each district by local enquiry the number of Sub-Inspectors required to replace head-constables as investigating officers, and the changes necessary in the distribution of the force; (2) to consider the reorganization of the district reserves, and how far this can be effected as part of the scheme of redistribution; and (3) to frame rules for the appointment of Sub-Inspectors and for their subsequent promotion. On these lines the Committee have submitted elaborate proposals for the reorganization of the police force in Bengal. Their suggestions, together with proposals for the reorganization of the higher grades of the police, have been under the Lieutenant-Governor's consideration after the close of the year. During the year itself a considerable outlay, amounting to Rs. 1,71,417 per annum, was sanctioned for the increase of the pay and clothing allowance of constables. A law was also passed for the reorganization of the special reserves, including the military police employed on

the South Lushai frontier, which will in future be known as the Bengal Military Police.

The Lieutenant-Governor has found it necessary to lay down precise instructions regarding the character of cases reported which the police should refrain from investigating. They are as follows:—That in cases of house-breaking or attempted house-breaking where there is no theft and no clue to the offender, and in theft cases where the property reported to have been stolen is less than Rs. 5 in value, and is also of such a nature as not easily to be identified, such as grain or fruit, and where the informant has no suspicion as to the offender, no enquiry should be held by the police unless the informant wishes for one. A third class of cases is that of assault, where other charges such as that of theft are superadded and appear to be more than doubtful; such cases had better be disposed of by petition to the Magistrate. Enquiry should, however, never be refused in the first two classes of cases when the aggrieved person desires that an enquiry should be held. The police may refrain from investigating a case of this kind in certain given circumstances, but should not refuse to enquire into a reported cognisable offence where an enquiry is asked for. His Honour hopes that by careful supervision and constant inspection District Superintendents will prevent any abuse of these rules in future.

The Lieutenant-Governor regrets to record the death after the close of the year of Mr. J. C. Veasey, who had been for several years Inspector-General of Police. Mr. E. R. Henry, who was officiating as Inspector-General during the year under report, has since been confirmed in the appointment.

22. Sir Charles Elliott accepted generally the recommendations of the Police Commission in regard to the working of

The criminal courts.

the criminal courts, and rules have been laid down to give effect to them. A fortnightly register, showing the number of under-trial prisoners, has been prescribed. The District Magistrate has been directed to inspect once a week the trial register of each subordinate Magistrate at head-quarters, sending for particular records, calling for explanation, or passing other orders where necessary. A statement has been prescribed for each court away from head-quarters, containing extracts from the trial register, showing each case which has been remanded more than three times or has been pending more than a month. Proposals have been made for holding more frequent sessions. The general powers of committal, which were hitherto exercised by all Magistrates of the second class, have been withdrawn. It has been arranged that more attention should be devoted to the prosecution of police cases, and the experiment of transferring a large portion of the Court Sub-Inspector's work to the Magistrate's office and of setting the Court Sub-Inspectors free from the multifarious details which now engross his time, so that he may have leisure to prepare cases and conduct prosecutions, was ordered for six months in six selected districts. The attention of District Magistrates has been drawn to the unnecessary detention of criminal lunatics while under observation in jail. They have been given to understand that jails and lunatic asylums are intended not for village idiots, who are accused of petty offences, possibly because their fellow-villagers have grown tired of supporting them, but for dangerous lunatics, who are charged with violent or homicidal acts or attempts, and that it is a part of their duty to see that none but such lunatics as come within the above description are admitted into them. It has been pointed out that accused persons are often detained before the courts for an unreasonable time while enquiries are being made by the police about their antecedents. It has been

enjoined on Magistrates and Subdivisional Officers that they should watch the proceedings of investigating police officers with greater care, and issue such instructions as they may think fit. The necessity of carefully watching over the work of their subordinates has been impressed again and again on District Magistrates with especial reference to delays in trying cases and unnecessary remands. At the suggestion of the Lieutenant-Governor the High Court have issued instructions to Sessions Judges that they are authorised and expected to inspect the Courts of Magistrates subordinate to them. Above all things Sir Charles Elliott has insisted that there shall be no avoidable delay in the disposal of cases. It should be a point of honour with Magistrates not to plead want of time as an excuse for adjournment; and when witnesses are in attendance, the court should not rise at 5 p.m., as has hitherto been too often the practice, but should sit till dusk or even after dark rather than subject parties and witnesses to the inconvenience of another day's detention. The Lieutenant-Governor is glad to be able to say that great improvement has already manifested itself in this department of the administration, and that his efforts to improve the procedure in Criminal Courts have been cordially responded to by all classes of Magistrates.

23. Early in the year proceedings were instituted under the Lieutenant-Governor's orders (with the approval of the Government of India) which had for their object to bring home to the conductors of the Native Press of Bengal that the disloyal and seditious utterances in which so many of their number permit themselves to indulge cannot be tolerated. The *Bangobasi* newspaper, which was selected for prosecution by the Lieutenant-Governor, acting upon the opinion of his legal advisers, by whom the articles upon which the prosecution was based were chosen, was one of those which, upon the passing into law of the Age of Consent Act, had shown themselves conspicuously violent in their attacks upon the Government. The law was clearly expounded in this case by the learned Chief Justice of Bengal, and it was shown beyond doubt that deliberate attempts to excite feelings of enmity and ill-will against the Government and to hold it up to the hatred and contempt of the people, and misrepresentation of the true state of affairs by partial statements of facts, so as to cause disaffection, are offences under the law, and that writings of this nature in the public press render those who publish them liable to punishment. In the trial which took place the jury disagreed in their verdict, and, under the orders of the Chief Justice, the case was postponed as a *remand* to the next ensuing sessions of the High Court. The proprietor, editor, manager, and publisher of the *Bangobasi* then presented a petition to the Lieutenant-Governor, in which they expressed contrition for having allowed the articles which formed the subject of the prosecution to appear in that paper, promised henceforth to conduct it in a spirit of loyalty to Her Majesty the Queen-Empress and the Government of India, and threw themselves unreservedly on the mercy of the Lieutenant-Governor. Representations were also made by the British Indian Association and by the Native Press Association—a body which was formed after the proceedings against the *Bangobasi* had been instituted, with the object, among others, of improving the tone of the Native Press and preserving moderation in the discussion of all public questions—interceding on behalf of the *Bangobasi* and entreating the Lieutenant-Governor to direct, in consideration of the humble submission of those responsible for the paper, that further criminal proceedings should be stayed. These memorials were forwarded by the Lieutenant-Governor to the Government of India with His

Honour's support, and, under the orders of His Excellency the Governor-General in Council, the matter was not pressed further against the defendants.

There is reason to believe that this act of lenity was appreciated by the community generally, and that it exercised a healthy influence on the tone of the Press at the time.

PRISONS.

24. The year was marked by a considerable increase in the jail population, the number both of admissions and of prisoners remaining in custody at the end of the year being greater than in any of the ten preceding years. The death-rate of 1891 was 30.9 per mille, which is the lowest rate in record. During the year an important change was made in the rules regarding the release of moribund prisoners. The previous rule had been that only such prisoners as were likely to die in jail, but had a reasonable hope of recovery at home, should be released. The Lieutenant-Governor, considering that no prisoner should be condemned to die in jail when he might have the consolation of dying at home, issued orders in February 1892, under which all moribund prisoners, except such as may have been sentenced to terms of imprisonment exceeding seven years for heinous crimes, are now released on the authority of the Magistrate of the district in cases where the unexpired portion of the sentence does not exceed six months, and in other cases under the orders of Government.

25. The expenditure on jail buildings has attracted the Lieutenant-Governor's notice. The existing system, by which all buildings, even in subsidiary jails, are built throughout of solid masonry, seems to be unnecessarily extravagant, and His Honour, while for the sake of uniformity permitting the standard plan to be generally followed in the case of those few subsidiary jails where it had not already been introduced, has specially insisted on economy in this direction. In future years the Inspector-General will be allowed a fixed grant for original works, to be spent at his discretion on the most urgent of the works which have received administrative sanction.

26. In his inspections of prisons the Lieutenant-Governor has also paid special attention to the labour question. His Honour found reason to believe that Superintendents of jails have, owing to the prominence given during the past few years to the important question of the health of prisoners and jail mortality, overlooked the punitive side of imprisonment. The importance of this matter has been brought to the notice of Superintendents, and orders have been issued for the employment, as far as possible, by the Public Works Department, of prisoners for such work as can properly be performed by convict labour.

27. Since the close of the year the Jail Department has suffered a severe loss by the transfer to the Government of India of the services of Surgeon-Lieutenant-Colonel A. S. Lethbridge, C.S.I., M.D., Inspector-General of Jails, who had held that appointment for over fourteen years. Dr. Lethbridge has been succeeded by Surgeon-Major D. W. D. Comins.

CIVIL JUSTICE.

28. The Lieutenant-Governor has lost no opportunity on tour of enquiring into the conduct of Civil as well as Criminal Administration, and of acquainting himself with

Number and health of prisoners.

Jail buildings.

Prison labour.

Transfer of the Inspector-General of Jails.

Civil Courts.

the requirements and defects of the Civil Courts. The inspection by District Judges of Courts subordinate to them is not always sufficiently carried out, and His Honour hopes that these inspections will in future be more frequent and more thorough, and that the Judges will set themselves to the examination of the avoidable causes which lead to postponements and delay in affording justice to litigants. The Lieutenant-Governor has paid special attention to the state of the Civil Court buildings, and he is satisfied that in some cases, especially in Eastern Bengal, there are valid grounds of complaint which require early attention. On the other hand, all objections are not equally reasonable, and His Honour has found it necessary to prepare a complete list of the existing buildings and of the demands for improvements drawn up and arranged in order of urgency, with a view to the allotment of funds for the relief of the most deserving cases. Sir Charles Elliott is desirous of concentrating the establishment of Munsifs' Courts as far as possible at district or subdivisional head-quarters, and with this object has hesitated to sanction proposals put forward for rebuilding or constructing isolated offices on a large scale. It is at head-quarters only that a good bar can be obtained, and proper inspection and supervision can be exercised over the proceedings of the lower Courts. As the Hon'ble Judges have intimated to Government that they are in general accord with the principle of concentration at head-quarters, it may be expected that the number of outlying munsifs will be gradually decreased, and that new buildings will in the future be more often at the sadar or subdivision stations than in distant localities.

29. Under the sanction of the Secretary of State four Subordinate Judges

Establishments.

and 16 Munsifs were appointed during the past year upon the permanent establishment. The abolition of

the special Small Cause Courts in Nadia and Jessor was also sanctioned, and all Subordinate Judges and some Munsifs were vested with the powers of a Small Cause Court Judge. The Lieutenant-Governor has also taken into his consideration the recommendations made by Messrs. Stevens and Toynbee, who were placed on special duty with a view to revising the strength and pay of the ministerial establishments attached to the Civil Courts in Bengal, and has sanctioned a moderate increase to existing establishments where circumstances seemed to render it necessary. In minor particulars His Honour has, with the concurrence of the High Court, given effect to improvements in the administration of civil justice.

30. At the request of the Government of India, the Lieutenant-Governor

Calcutta Small Cause Court.

instituted a careful enquiry into the working of the Calcutta Court of Small Causes. He considers

that the chief point which requires amendment in the procedure of the Court relates to the delay in dealing with contentious cases, and as a remedy for this delay His Honour has recommended that legal powers should be given to the Judges to deal with undefended cases in a more summary manner; that all cases should be placed on cause lists, the number suited to the average capacity of a Court being fixed for each day, and that a rule should be made that cases postponed from one day must be heard the next day; that a single Court if it gets into arrears must sit later than usual to try its cases; that if the whole Court gets into arrears, it must enjoy fewer holidays and sit for more days and for longer hours; and finally, that power should be given to the Chief Judge to frame rules of procedure from time to time with the sanction of the Local Government. Sir Charles Elliott has also strongly pressed for the appointment

of a permanent fifth Judge, and has insisted on a reduction in the ministerial establishment employed, which, as shown by the Finance Committee, was excessive in comparison with that entertained in other Presidencies.

REGISTRATION.

31. The development of the work and revenue of this department continued satisfactorily during the year. The policy of replacing *ex-officio* Sub-Registrars by special officers was maintained, and the former class will soon disappear altogether. His Honour has encouraged the multiplication of rural sub-registry offices, being of opinion that the opening of new offices tends greatly to the public convenience, besides ministering to an increase of revenue. Attention has been paid to the question of the proper performance of their duties of inspection by Special Sub-Registrars, and orders have been issued that any officer failing in his duty in this respect will be liable to a reduction of pay under the orders of Government on the recommendation of the Inspector-General. Sir Charles Elliott has also directed that, with a view to the selection of the best possible candidates for appointment as Rural Sub-Registrars, three names shall be submitted by the District Registrar to the Inspector-General for each appointment, and that the Inspector-General shall, wherever practicable, personally examine the candidates before making any recommendation to Government.

MUNICIPAL ADMINISTRATION.

32. The chief event of the official year in Calcutta was the second general election of Municipal Commissioners under Bengal Calcutta Municipal Elections, Act II of 1888, which took place on the 15th March 1892. This excited much interest among the Hindus; canvassing was freely resorted to, and in several wards the election was hotly contested. By the European and Muhammadan rate-payers, on the other hand, the proceedings were regarded with comparative indifference; and a comparison of the election statistics of 1889 and 1892 shows that while the proportion of Hindus actually voting to the number entitled to vote rose from less than one-third to nearly one-half, the proportion of Muhammadan voters declined in an inverse ratio, and that of Europeans, including Eurasians, remained stationary.

33. Difficulties arose during the year in the working of those sections of the Calcutta Municipal Act of 1888 which provide for Assessments under the Calcutta Municipal Act. the hearing of objections to the assessment of residential houses. Under the law as it now stands, only the Chairman or Vice-Chairman can determine objections, and the work has fallen into arrear. The Chairman addressed Government on the subject, and recommended either that the Chairman should be empowered to delegate the duty of deciding objections to officers of the Corporation other than the Vice-Chairman, or that a special officer should be appointed for the purpose. He intimated, at the same time, that many of the Commissioners would prefer to revert to the earlier practice, under which appeals against assessments were heard by not less than three Commissioners. In replying to this letter, the Lieutenant-Governor briefly reviewed the situation and invited an expression of the views of the Corporation on certain alternative proposals based on the English system of assessing local rates.

34. The representative Committee appointed in February 1891 to discuss the question of the support of the Calcutta Fire Brigade submitted their report during the past year. They showed that under the present law jute and cotton warehouses pay the entire cost of the brigade, and they recommended that the Act should be amended so as to divide these charges more equitably; 70 per cent. being levied in the form of license fees from buildings in which substances involving special risk of fire are stored, and the remaining 30 per cent. being paid by the general public as represented by the Municipalities of Calcutta, Howrah, Cossipore-Chitpur, Maniktola, and the Southern Suburbs. The representative of the Calcutta Municipality recorded a partial dissent from these proposals, but the Lieutenant-Governor accepted the conclusions of the majority of the Committee, and a Bill embodying them was submitted to the Government of India towards the close of the year.

35. In March 1891 the Corporation of Calcutta reported that the hackney carriage service in the city was far from satisfactory, and had given occasion to much justifiable criticism and complaint. The Lieutenant-Governor accepted the view of the Commissioners, and in the April Session of the Bengal Legislative Council a Bill was introduced changing the year of registration so as to run from 1st October; permitting first class carriages to ply for hire; strengthening the control of the Municipality over the description of carriages and horses to be used; raising the age of drivers recasting the schedule relating to rates and fares; and empowering the Municipal Commissioners to frame bye-laws dealing with such questions as the quality of carriages, the size and condition of ponies and horses, tables of distances, the examination and qualifications of drivers, the conditions of their employment, and the like. The Bill was referred to a Select Committee, and received the assent of the Governor-General on the 11th September 1891.

36. Early in 1891-92 the attention of the Lieutenant-Governor was drawn to a judgment of the High Court, ruling that orders passed extending certain provisions of the repealed Bengal Municipal Act V of 1876 to particular municipalities did not apply to the corresponding provisions of Bengal Municipal Act III of 1884. It followed that those provisions dealing with important branches of conservancy, sanitation and cognate subjects, were not in force in any municipality to which they had been extended under Bengal Act V of 1876. This state of things called for an immediate remedy. Two courses were open: either to amend the Act so as to validate orders of the kind referred to which were passed under the old Act, or to issue fresh orders under the new Act for each place affected by the judgment. While considering this point, the Lieutenant-Governor was led to enter upon the general question whether the time had not come to amend the Bengal Municipal Act III of 1884 on a variety of points which had from time to time been brought to notice as calling for amendment. The matter principally requiring reform is the system under which the assessment of municipal rates is framed, in which many irregularities are found to exist. Larger powers are also needed to enable the municipalities to enforce sanitary regulations, and provisions are required to facilitate the control of the

Government over municipalities which neglect their duties—a control which can now only be exercised by the drastic process of suspending or abolishing the powers of the Commissioners. A draft Bill embodying such changes as appeared to be most urgently called for was accordingly prepared and submitted for approval to the Government of India. The question was still under discussion at the close of the year.

37. In reviewing the report of the Sanitary Commissioner for the year, and in connection with the inspection of certain municipalities made by the Municipal Secretary, the Lieutenant-Governor's attention was drawn to the reluctance or inability of Municipal Commissioners to make adequate provision for the registration of births and deaths—a duty which was imposed upon them in 1886 under section 346 of the Bengal Municipal Act III of 1884. With few exceptions, the vital statistics collected by municipalities were found to be worthless, and it became evident that the proper performance of this duty demanded closer supervision than could ordinarily be looked for from the Commissioners. After making enquiries and consulting the heads of the departments concerned, it was decided to transfer this work to the town chaukidars in all municipalities with effect from the 1st January 1892.

38. In July 1891 the Executive Committee of the Puri Temple Fund, including some of the leading representatives of the Hindu community in Calcutta, represented to the Government the urgent necessity for improving the supply of drinking water and the sanitation of the town of Puri. Their suggestions were carefully considered by the local officers and by the Lieutenant-Governor himself during his visit to Puri in February 1892. A loan was sanctioned for the purpose of carrying out a drainage scheme. The proposal to provide a supply of drinking water from the river Surnomai was not approved because of the impurity of the source, and it was held that the necessities of the case would be met by paying proper attention to the purification of the wells, which are good and abundant, and from which most of the people drink. Instructions were also given to the municipalities as to the steps which might be taken to purify the water of the sacred tanks.

39. In dealing with the municipal reports of the year 1890-91, the Lieutenant-Governor laid down that municipalities might fairly be required to provide primary education for all boys of school-going age—a number which may be taken to be 15 per cent. of the male population of the town. Commissioners of Divisions were authorised to give effect to this principle when passing the annual estimates under section 76 of the Municipal Act, and to see that municipalities make ample provision for primary schools before allotting funds in support of secondary education. It was suggested that the best means of attaining this end would be to ask each municipality to prepare a definite scheme for providing the requisite number of primary schools, and to submit it for the Commissioner's approval. It was proposed that the grants given by Government to primary schools within municipal limits should be made over to the municipalities concerned for expenditure on the same object, and these, together with the relief afforded by the transfer of the collection and registration of vital statistics to the town police, will appreciably relieve their finances and help them to meet the new liability.

40. Considerable attention was paid during the year to the important questions of municipal drainage and water-supply.

Drainage and water-supply.

At Dacca the existing water-works, the gift of Nawab Sir Khwaja Abdul Ghami, Bahadur, K.C.S.I., and his son Nawab Khwaja Ahsanullah, Bahadur, C.I.E., were materially extended by means of a loan sanctioned by Government. The Bardwan Municipality matured a scheme for extending their supply of filtered water, and had under consideration a project for draining the town. The question of draining the town of Howrah and providing an adequate supply of pure water was discussed by the Sanitary Board, but no final conclusion was arrived at. Projects for the drainage and water-supply of the group of municipalities on the east bank of the Hooghly, in the 24-Parganas, were brought forward and considered by the Sanitary Board. The Serampore Municipality obtained a loan for drainage, but the amount was not drawn during the year. The Commissioners of Utterpara applied for a loan for the same purpose and commenced a survey. In Patna the municipal area was carefully surveyed, and a comprehensive drainage scheme estimated to cost nearly 3½ lakhs drawn up for the approval of Government. A similar scheme was undertaken in Muzaffarpur with the assistance of the Executive Engineer. Drainage surveys were also started in Midnapore and Bally. The Commissioners of Chittagong applied for the services of an engineer for water-supply, and the Pabna Commissioners made a similar application for a drainage scheme. The artificial lake which supplies the town of Chaibassa with water was re-excavated and cleared out by the Commissioners during the year.

41. Although the administrative status of the Sanitary Board has not yet been very exactly defined, and no Statutory powers have been conferred upon them, they rendered

The Sanitary Board.

effective service during the year as the official advisers both of Government and of the local authorities, who have to deal with questions affecting sanitation. Both District Boards and Municipal Commissioners sought the advice of the Board freely in the early stages of schemes of sanitary improvement. Projects of drainage and water-supply were initiated at their instance and under their supervision, and their influence was usefully exerted to procure the execution of the preliminary surveys, without which it is often impossible to determine whether a particular scheme is feasible or not. Arrangements were made to place at the disposal of the Board a complete set of surveying instruments to be lent to local authorities, who are often deterred from undertaking surveys by the cost of the necessary instruments. In the later stages of these operations, when schemes recommended by local authorities come before Government for legal sanction, or in connection with applications for loans, the Sanitary Board discharges a useful function in aiding Government with their professional advice, which is all the more valuable for being based upon local experience acquired in dealing with the initial stages of the projects under discussion. No change in the constitution and duties of the Board was introduced during the year, nor does any such change seem at present to be called for.

42. Excluding Calcutta, the total number of municipalities in existence at the close of the year was 145, the total population enjoying the benefits of municipal administration

Statistics.

being, as shown by the recent census, 2,721,405 souls, or 3·8 per cent. of the whole. The average incidence per head of municipal taxation of all kinds was Re. 0-12 4, against Re. 0-11-11 in the previous year. The current demand was

Rs. 19,59,240, and out of this Rs. 15,69,550, or 80·1 per cent., was collected. Of the arrear demand of Rs. 4,15,370 only Rs. 2,99,455, or 72 per cent., was collected, and Rs. 61,011, or 14·6 per cent., was remitted. The year closed with an outstanding balance of Rs. 3,95,077, being about 16·6 per cent. of the total demand.

There was an increase in the total income of municipalities (excepting Calcutta) of Rs. 80,028, and in the income from taxation of Rs. 1,04,202. The total municipal expenditure of the Province (excluding Calcutta) was Rs. 28,66,056. The year closed with a balance of Rs. 3,99,028, against Rs. 3,60,942 of the year 1890-91. The largest expenditure was as usual incurred on conservancy (Rs. 8,00,365), roads (Rs. 4,32,606), hospitals and dispensaries (Rs. 2,58,544), office establishment (Rs. 1,87,452), collection charges (Rs. 1,38,896), lighting (Rs. 1,39,511), and public instruction (Rs. 1,30,068). Municipal Benches tried 20,090 cases of nuisance and breaches of conservancy rules, in which 17,352 persons were convicted, against 19,608 cases and 17,689 persons convicted in the previous year.

LOCAL SELF-GOVERNMENT.

43. Much attention was given during the year to the question of rural sanitation, which is one of extreme difficulty in Bengal, not merely because the financial resources of the District Boards are wholly inadequate to the work to be done, but also because no village agency exists competent to carry out the simple measures which are necessary to guard against the pollution of the village site and the fouling of the water-supply. Under existing conditions the District Board alone is in a position to take effective action in these matters, and the range within which its influence can be exercised is necessarily limited. Clearly the Boards cannot execute all the sanitary works that are needed. But they have been directed to set examples as opportunity offers by cleaning tanks, digging or cleaning out wells, especially along the chief roads, and by promoting general knowledge of the measures which tend to improve the healthiness of a locality. If these sanitary works are well and cheaply done, not of too elaborate a character, and if use be made of materials available on the spot, it may be hoped that neighbouring land-holders will be led to undertake works of the same kind, and that the villagers may themselves combine to carry out petty local schemes, with or without the assistance of the Board. Such works should be distributed impartially in different parts of the district, in order to diffuse as widely as possible the knowledge of what the District Board is doing and what its intentions are.

In the case of one district visited by the Lieutenant-Governor on tour, where it was represented to him that many of the old tanks had silted up, the District Board was instructed to set apart a certain sum of money each year for the purpose of cleaning out tanks and to choose those which are important as being the chief or sole drinking supply for a considerable number of people, and which show signs of becoming silted up. Irrigation tanks, it was added, might be left to the care of those who profit by them, and the Board might properly make it a condition that the people to be benefited contribute at least half the sum to be expended. By working on these lines the Board may be able to take

in hand from 10 to 20 tanks a year. This would be a popular mode of expenditure and a real source of relief and comfort to the population.

44. In reviewing the annual report of the Sanitary Commissioner for 1889, the Government of India suggested that steps should be taken to secure better management and sanitary supervision at places where large numbers of visitors congregate from different parts of the country. In order to give effect to this suggestion the Sanitary Commissioner submitted for the consideration of Government certain "sanitary rules and precautions" which he thought should be observed at religious fairs and festivals. The rules were circulated for the opinion of district and divisional officers, with an indication of the Lieutenant-Governor's views as to the extent to which they would be applicable to municipal and district areas, respectively, and as to the general character of the obligations which may properly be undertaken by the District Boards. Final orders will be passed on receipt of their replies.

45. The Government of India having suggested that the system of farming out cattle-pounds was in some respects open to objection, the question of the continuance of this practice was carefully considered in consultation with district and divisional officers, who reported on the matter at great length. In reviewing the whole subject it was concluded that the increase in the number of pounds effected in recent years had been very advantageous to the people; that such increase was only possible under the farming system; that the system of direct management could only be properly worked at thanas, subdivisional head-quarters, &c., under the eye of officials, and could not properly be applied to outlying villages, where constant supervision cannot be exercised over the pound-keeper; that there is no reason to insist upon direct management being introduced even at head-quarters of thanas, inasmuch as all the charges brought against the farming system are equally applicable to the direct system so long as it is possible for the paid pound-keeper to embezzle the receipts and not to enter them in his book; and that the attempt now to go back to the system of direct management would inflict a heavy loss on the revenues of the District Boards, which Provincial funds would be unable to meet, and which would therefore have to be made good by an Imperial grant. It was observed at the same time that, although there can be no doubt as to the general soundness of the system of farming pounds, no one would claim that it is absolutely self-working, and that there were some grounds for believing that the transfer of pounds to District Boards might have been accompanied by some relaxation of supervision.

It was therefore proposed (a) that arrangements should be made to secure the regular and systematic inspection of pounds by officers of Government; (b) that leases should be granted, usually for a term of three years, if possible to persons residing in the neighbourhood of the pounds which they farm, and in any case to men certified by the District Magistrate as solvent and respectable; (c) that the villages to be served by each pound should be specified in the pound-keeper's agreement as is contemplated by section 4 of Act I of 1871; (d) that such registers should be kept and such forms of receipts prescribed as would enable a proper check to be kept over the pound-keepers without making unduly close inquiry into the amount of the farmer's profits. These views

have since the close of the year received the approval of the Government of India, and steps are being taken to carry them into effect.

46. Towards the close of the official year 1890-91 the attention of all District

Provident Funds.

Boards was drawn to the advantages attaching to provident funds, in comparison with pensions, as a means of securing for the employes of the Boards an adequate provision after their retirement. Rules were drawn up and circulated, and the Boards were invited to consider the question and submit proposals. During the past year (1891-92) three District Boards have adopted provident funds.

47. In the revised edition of the Bengal Famine Code, which was issued

Duties of District Boards in times of scarcity.

at the end of the year, the duties of District Boards, in times of scarcity and famine, were defined. It was laid down that District Boards must be regarded as forming an integral part of the administration, and that it becomes their duty, as it is that of other departments of Government in time of serious scarcity, to subordinate the ordinary objects and methods of their expenditure to the special consideration of saving life. District Boards, it was held, are the primary agency available for coping with famine, and must be expected in such a crisis to direct their whole resources, subject only to the maintenance of absolutely necessary works in non-affected tracts, to affording relief. This primary obligation having been carried out, it remains for Government to supplement the resources of Boards, if necessary, so as to enable them not only to combat famine, but also to perform their ordinary functions connected with the up-keep of district communications. Before, then, an appeal is made by the Boards to Government for funds, all possible expenditure, beyond that absolutely necessary for bare maintenance and establishment charges, should be diverted from non-affected to affected areas, and from ordinary works of construction, such as bridges, which require the employment of skilled labour, to those which can be carried out by the unskilled labour of the ordinary rural population who are affected by the scarcity; and on the opening of relief operations the district budgets should be remodelled with this object.

It was also ordered that the relief operations carried on by District Boards, whether in the form of gratuitous relief, poor-houses, kitchens for children or relief works (whether civil agency or professional agency) should be regulated by the provisions, and their officers should be subject to the rules laid down in the Code. But though the agency of the District Boards is utilised in carrying out gratuitous relief, it is not considered that the cost of such relief falls legitimately upon their finances, and they will be recouped for such expenditure from Provincial funds.

48. Action was taken for the first time under section 64 of Bengal Act III of 1885, providing for the transfer of high English

Transfer of high schools to local bodies.

schools under public management to local bodies.

By a notification dated the 13th November 1891, the maintenance and management of the high English school at Monghyr were entrusted to a joint-committee, consisting of ten members—five delegated by the District Board of Monghyr, and five by the Commissioners of the Municipality. The cost of maintenance was ordered to be paid by the Municipal Commissioners and the District Board, respectively, in the proportion of four to five.

49. The number of meetings of District Boards during 1891-92 was 512,
the average number for each Board being 13·4.

Statistics.

The total income and expenditure of the Boards in Bengal were respectively Rs. 62,13,324 and Rs. 62,91,657, against Rs. 58,67,818 and Rs. 61,29,603 for the previous year. The income under Provincial rates increased from Rs. 33,38,524 to Rs. 35,10,235, chiefly owing to the better collection of road cess. The receipts under Pounds increased by Rs. 28,412, and under Miscellaneous by Rs. 24,095, while the total receipts under Civil Works increased from Rs. 3,73,379 to Rs. 4,18,759. There was an increase also in the income under Education and Medical. The expenditure under Administration increased by Rs. 17,010, under Education by Rs. 1,03,520, and under Medical by Rs. 17,814, while the total expenditure under Civil Works increased from Rs. 39,37,161 to Rs. 40,43,238—an increase of over a lakh of rupees. During the year 22,308 miles of roads of all kinds were maintained at a cost of Rs. 26,97,002. Of the total length, 3,362 miles were embanked, bridged, and metalled roads, 12,023 miles were embanked and bridged but not metalled, and 6,923 miles not embanked or bridged. Of the total cost, Rs. 10,81,607 were expended in original works and Rs. 16,15,935 in repairs.

MARINE.

50. In the beginning of the year the Chamber of Shipping of the United Kingdom memorialized the Secretary of State,

Improvement in the navigation
of the Hooghly.

requesting him to urge on the Government of India the necessity of taking immediate steps to remedy the obstruction to navigation and the heavy loss caused to shipowners by the silting up of the river Hooghly at the Nynan bar. The matter was referred to the Port Commissioners, who had been addressed on the subject by the Chamber of Commerce and the Liners' Conference. The conclusion arrived at, which was reported to the Secretary of State, was that the channel of the Hooghly near the Nynan bar had deteriorated, but that it was impossible to say whether the deterioration would be permanent, and that no method by which a lasting improvement would result could probably be found. A proposal made about the same time to light the bar at night, which was at first regarded with some favour by the shipping interest, was negatived, as the pilots were opposed to it, and the gentlemen who originally advocated it, on being made aware of the dangers and disadvantages which would be incurred, expressed their desire that no further steps should be taken in the matter. The possibility of utilising the Mutla river as an alternative route to Calcutta was again brought forward and a resurvey of that river suggested. The project, which turned out to be more costly than had been supposed, fell through owing to the Port Commissioners declining to devote any of their funds to it, and the Government of India, from whom the suggestion came, refusing to provide for any part of the expenditure necessary.

51. A cyclone of unusual severity crossed the Sandheads on the 5th and 6th November. The pilot-vessel *Fame* was much

Cyclone of 6th November 1891.

damaged, and the *Coleroon* foundered, all on board being lost. The crew consisted of five officers and thirty-seven men all told: a sum of Rs. 4,080, equivalent to six months' wages, was distributed amongst the families of the men. The question of the best type of vessel to replace the *Coleroon* has been the subject of anxious and careful consideration. The Director of the Royal Indian Marine proposed the introduction of steam, but

the pilots were found to be strongly and unanimously in favour of a brig similar to the *Fame*, which, it has been decided, will be built at the Government Dockyard at Bombay. The buildings at Shortt's Island in connection with the light-house were injured by the cyclone, but have since been repaired.

52. The Kidderpore docks were completed during the year. No further movement has been observed in the dock walls, and it is hoped that the measures taken by the Engineer

The Kidderpore docks.

for their security, which were in accordance with the recommendation of the Special Committee, will prove successful. With the exception, however, of the graving dock, the docks have not yet been used, as the necessary arrangements for connecting them with the railway lines had not been completed. The scale of fees to be charged both for the wet and graving dock was approved by the Local Government. The Port Commissioners have not yet, as required by the Government of India, submitted a table of rates for their tramway, in which terminals are separated from carrying charges. A working arrangement with the Eastern Bengal State Railway has been adopted.

53. The clergy of Calcutta presented a petition to the Lieutenant-Governor on the subject of Sunday labour in the port, and

Sunday labour in the Ports of Calcutta and Chittagong.

communications were also received from other bodies in India and England interested. The

feeling of the mercantile community, as well as that of the officers and seamen, was found to be strongly in favour of restricting Sunday labour as much as practicable, but the situation of the port, where the loss of a tide might involve the detention of vessels for a fortnight, required that great caution should be exercised in framing rules. Eventually, with the assistance of the Bengal Chamber of Commerce, rules were drawn up and passed prohibiting Sunday labour, unless in cases of real emergency. The effect of the regulations has been to greatly diminish the working of ships on Sunday. Similar rules have been framed for the port of Chittagong: for the Orissa ports no restrictions appear to be required.

54. Since 1886 it has been the practice to hold artillery practice yearly from Fort Fultah. The firing goes on for two days,

Artillery practice on the Hooghly.

usually in the month of February, and involves the clearing of sixty villages and hamlets situated in the line of fire. Guns of increased power have now been fixed in the Fort, having a range of six miles, so that this year the area of clearance had to be greatly extended. The number of villages affected is now 138, and it is estimated that about 20,000 people had temporarily to vacate their dwellings. Considerable inconvenience and even suffering is caused by this enforced exodus, and receiving a proposal to increase the number of practices to four a year, the Lieutenant-Governor was compelled to advise the Government of India that it was quite impracticable to turn these people out of their houses more than once a year, and that even then some moderate compensation, sufficient to cover expenses actually incurred, should be granted.

PRODUCTION AND DISTRIBUTION.

55. The management of the Calcutta Botanical Gardens continues to be excellent, and during the past year, despite an abnormally dry season, many improvements were

Botanical Gardens.

effected. Over 19,000 specimens collected from various sources were contributed to the Herbarium, and the gifts of private individuals, together with the botanical explorations of the Curator and the collectors employed by the Calcutta Garden, added some valuable collections. The third volume of the garden annals was issued, and the bulk of the material for the fourth volume was prepared.

56. The establishment of a Veterinary School and Hospital in the vicinity of Calcutta has long been in contemplation, and

Establishment of a Veterinary School and Hospital near Calcutta.

the Lieutenant-Governor decided that the time had come to give practical effect to this proposal.

Private liberality in aid of the project has not been wanting, and the foundation stone has been laid of an institution at Belgachia, a suburb of Calcutta, the chief aims of which will be the amelioration of the condition of animals, the investigation and treatment of cattle-disease, and the instruction in veterinary science of a class of young men whose services will in the course of time be utilised throughout the Province. It will also provide a home for the treatment of sick and sore animals belonging to the drivers of hackney carriages and bullock carts, admittance being regulated in accordance with

1. Mr. M. Finucane, C.S., Director of the Department of Land Records and Agriculture, Bengal.

2. Babu Sheo Baksh Bagla.

3. Mr. W. B. Gwyther, Executive Engineer, to be also Secretary.

rules to be framed hereafter. A Committee, consisting of the members named on the margin, has been appointed to supervise the construction of the necessary buildings and to complete the organization and general working arrangements of the institution. Since the close of the year the

Committee have had the assistance and advice in respect to plans and estimates of Veterinary Captain W. D. Gunn of the Civil Veterinary Department, whose services were placed at the disposal of this Government by the Government of India. This officer will in due course be appointed Superintendent of the Veterinary Institution.

The combined School and Hospital will be known as the Bengal Veterinary Institution, while the two sections will be styled (1) "The Kenneth McLeod Veterinary School," and (2) "The Sir Dinshaw Manockjee Petit Veterinary Hospital," in deference to the wishes of Babu Sheo Baksh Bagla, of Calcutta, and Sir Dinshaw Manockjee Petit, of Bombay, the former of whom has subscribed and paid to Government Rs. 30,000, at the same time making a free gift of part of the land required and a house standing upon it, while the latter has promised a donation of Rs. 25,000 in furtherance of the scheme.

Dr. Kenneth McLeod, Professor of Surgery, Calcutta Medical College, has given an endowment amounting to Rs. 2,500 for the purpose of founding a scholarship to be styled the Sheo Baksh Bagla Veterinary Scholarship of the value of Rs. 10 a month, tenable for three years, in connection with this institution.

57. As the early cessation of the rains in September 1891 gave rise to apprehensions that the great winter rice crop of

Scarcity reports.

Bengal must be materially injured and that distress

would probably ensue, the Lieutenant-Governor called for full and periodical reports from Collectors as to the condition of the crops and of the people, revised and republished the Famine Code, caused lists of works available for purposes of relief to be prepared afresh, and thus maintained the Administration in readiness to meet famine, should it come. The first warning that scarcity was impending in some of the districts in the Patna, Bhagalpur, and Rajshahi

Divisions was given to the Government of India so long ago as December 1891. The forecast then made has been verified by the result. Although a good bhadoi harvest (or early rain crop) enabled the cultivators to bear without much suffering the loss of the greater part of the winter rice crop, the continuance of drought reduced the outturn of the rabi crop almost to nothing, and resulted in the presence of a more or less widespread distress, which in March necessitated the opening of relief works in several districts. As was anticipated, the effects of the scarcity have been most acutely felt in the district of Darbhanga and in parts of Muzaffarpur, Monghyr, Bhagalpur, Purnea, and Dinajpur. Prices, though high, have nowhere risen to actual famine pitch, but the dearth of employment threw on the District Boards the responsibility of enabling all agricultural labourers who were out of work to earn subsistence wages, and it was for this purpose that relief works were opened. In the event of district funds failing, Government undertook to supplement them from Provincial resources, and to grant loans liberally under the Land Improvements and Agriculturists' Loans Acts. Monthly reports have been, since the close of the year 1891-92, regularly submitted to the Supreme Government giving particulars as to the affected tracts and the relief operations undertaken. On the 1st April 1892 there were about 23,000 labourers on the relief works, and nearly 900 people were in receipt of gratuitous relief.

FORESTS.

58. The reconstitution of forest charges has now been completely carried out. The system under which Divisional Forest Officers supervised the working of groups of subdivisions in addition, in some cases, to holding direct charge of one or more subdivisions, has been entirely abolished. Independent Forest Divisions have been substituted, which are all under direct subordination to the Conservator. The result is that there are now twelve Divisions, in place of eight, including Direction, but excluding the Working Plans Division, which has also been abolished because there was no officer available to keep it up. By these changes, which were rendered necessary by the paucity of the staff of the Forest Department, it has been sought to economise the services of individual officers to the best advantage and to promote general efficiency.

59. The proposal to transfer the Government forests of the Sonthal Parganas to the management of the Forest Department having been revived, the Conservator was deputed to visit the district and submit a report after consultation with the local officers. The outcome of this visit was a scheme to declare the forests in the tract known as the Damin-i-koh protected under the Forest Act, and to constitute these and other Government forests in the Parganas a separate Forest Division under the Department. The Lieutenant-Governor has expressed his approval generally of the joint recommendations of the Commissioner of Bhagalpur and the Conservator, and, if the Government of India can provide an additional Forest Officer to take charge of the new Division, will take the necessary steps to give effect to the proposal.

60. Wherever practicable, waste lands belonging to the State in Chota Nagpur and not let out on long-term leases have been constituted Protected Forests under the Forest Act. It is hoped that when its advantages are made

apparent, the example so set will be extensively followed by the private owners of large forest estates in the Division and by the Native Chiefs, with whom the Commissioner has already been requested to use his influence in this direction.

61. Measures for the protection of insectivorous birds in the interest of agriculture have been under the consideration of Government. It has been proposed to take power to extend Act XX of 1887, an Act for the Protection of Wild Birds and Game, to such local areas outside of municipalities and cantonments as the Local Government may decide to be suitable for its operation. It was decided, however, that such protection could not prudently be carried out by the action of Government, except within the limits of the Government Forests, but that it might be extended there to a number of specified animals, including birds other than insectivorous birds, and fish. Revised rules were accordingly drawn up under the Forest Act for the regulation of hunting, shooting, fishing and the setting of snares or traps in Government Forests, and submitted for the sanction of the Government of India.

62. The outturn of the Cinchona Factory, which is regulated by the demand, exceeded that of the previous year. Four thousand five hundred and eighty-six pounds of sulphate of quinine and 4,190 pounds of febrifuge were produced, the entire quantity being manufactured by the mixed oil process, which continues to work satisfactorily. The revenue derived from the sale of sulphate of quinine, cinchona febrifuge, cinchona bark, and other products of the plantation amounted to Rs. 1,00,322, yielding a net profit of Rs. 7,963. The profit, small as it is, was sufficient, the aim of Government being not to secure a profit, but to bring within the reach of the people a cheap remedy for fever.

PUBLIC WORKS.

63. The waste of time and labour involved in the preparation of projects which had not been first of all submitted in the rough, and received the stamp of approval from the Local Government, was noticed by the Lieutenant-Governor, and the procedure has now been so altered as to require officials needing alterations or additions to buildings used by them or new accommodation to prove the necessity of their requirements through the head of their own Department, the local Engineers merely providing them with rough plans and approximate estimates to enable them to do so. When the necessity for a work is proved, administrative sanction is given, and the Public Works Department is then called upon to prepare a detailed scheme and to provide funds, if possible.

64. The Lieutenant-Governor took exception to the existence of a duplicate executive and superintending agency in most parts of the Province for the carrying out and control of works in connection with buildings and roads. Almost all the roads and all Local Fund buildings, such as dispensaries, dák bungalows, &c., had been handed over to the District Board, and placed under the care of District Engineers, while Imperial and

Provincial buildings, such as Post and Telegraph offices, Churches, Courts and Jails, remained under the charge of Executive Engineers. The result of this was that Executive and District Engineers constantly travelled over the same ground, and competed with each other for labour for adjacent buildings, two officers being employed on work which could easily be done by one, while the charges of Superintending Engineers and Inspectors of Local Works were found to overlap. This waste of power has been checked by handing over the care of Provincial and Imperial buildings to District Boards, and abolishing all but two of the Inspectorships of Local Works, relegating their duties to Superintending Engineers. By this re-arrangement it has been found possible to considerably reduce the *cadre* in the Roads and Buildings Branch, and the saving in the cost of establishment has been about Rs. 52,700 per annum.

65. The fuller utilization of jail labour on public works was another matter that engaged the attention of the Lieutenant-Governor, and orders were issued with a view

Utilization of jail labour.

to the employment of strong adult prisoners on such operations as brick and tile making, stone breaking, and soorkee pounding, which had hitherto been carried out by means of free labour; also on construction and repairs required to be done inside the jails and on new buildings and earthwork outside, but situated within two miles of it.

66. The principal buildings in hand during the year were the new offices

Principal works of construction.

in Dalhousie Square, Calcutta, to accommodate the Presidency Commissioner, the Collector of Calcutta, and the Collector of Income Tax; and the new School of Art in Chowringhee Road.

67. The ownership of the Budh Gaya temple was a question which came

Miscellaneous.

before the Government, but it was decided not to disturb the present understanding in the matter, nor to officially interfere in regard to the scheme suggested by some Buddhists to acquire possession of this famous place of worship in which they feel a keen interest.

Some interesting Buddhist remains, known as the Broadley collection, had been lying for several years at Bibár in the Patna district. Though of much historical and artistic value, their existence was not generally known, and they were practically out of reach; it was therefore recommended that these carvings and statuary should be transferred to the Indian Museum, where they could be preserved from further injury and be accessible to the student. The proposal was approved of by Government, and a grant of money was sanctioned for the purpose.

Experiments were made in the Muzaffarpur district to induce rainfall by means of dynamite explosions, but they proved unsuccessful, probably owing to the extreme dryness of the atmosphere.

IRRIGATION.

68. The Orissa Canals have never yet been nearly fully utilized owing

Orissa canals.

to the non-completion of the necessary distributing channels. The delay in finishing these works has more than once been commented on by the Government of India; and with

the view of hastening their completion and enquiring into the causes which had retarded their progress, the Lieutenant-Governor paid a visit to Cuttack in January 1891. The revenue administration of these canals had never been satisfactory, and successive years showed no signs of improvement, so the opportunity afforded by the tour was taken to enquire into the defects of the system.

69. It was found that the delay in pushing on the distributary works was mainly owing to plans and estimates not having been prepared as expeditiously as they ought to have been, but there was also great procrastination in acquiring land, and little energy was shown in carrying on works after they had been sanctioned and the land acquired. The Inspector-General of Irrigation, Colonel F. Home, R.E., visited Orissa in the same month, and measures, which have proved to be effective, were taken to secure more rapid progress with the distributaries, as well as with certain other works which that officer recommended should be completed.

70. The enquiry into the revenue administration also disclosed many defects. The assessments were made altogether independently of the Engineers, who were frequently not even consulted as to the lands for which water could be given. The enquiry into cases of unauthorized irrigation was delayed until long after the crops had been harvested. The five-year leases were granted on a system which necessitated a yearly enquiry and a yearly variation in the demand. The arrangements for collecting were found to be ineffective and not economical. Altogether it was evident that extensive and radical changes were necessary.

71. A commencement of reform was made by vesting the Engineers with the powers of Canal Officers, and by discouraging charges for unauthorized irrigation unless careful and judicial enquiries had first been made into the history of each case. An experienced Irrigation Engineer, Mr. R. B. Buckley, who was conversant with the system in force in the Sone Canals, was directed to draw up, in communication with the local officers, rules having for their object the reform of the system generally, and especially the issue of demand statements whilst the crop was still in the ground, and the collection of water-rates before the cultivator had expended the proceeds derived from his crops. The rules drafted by this officer were generally such as to meet with approval, but his suggestions involved an increased expenditure beyond what appeared to be absolutely necessary. The Lieutenant-Governor paid a second visit to Orissa in February 1892, and a system more resembling that in force in Bihâr has been introduced. The Engineers have practically been made responsible for the assessments, and a Deputy Collector has been placed in charge of the collections and vested with certificate powers. In accordance with the recommendations of the Commissioner, the subordinate staff will continue to be employed both on assessments and collections, so that no violent change in the direct communications between the irrigation officials and the cultivators has been introduced. Some details connected with the revised arrangements have still to be decided, but it is expected that towards the close of the current year a new set of rules providing for all necessary changes will be passed.

72. Difficulties have been found in controlling irrigation from the Midnapore Canal, there being no village channels and no means of preventing land lying between distributaries and leased areas being irrigated gratuitously.

Distribution of water in the Midnapore Canals.

A system, known as the block system, has been introduced, under which leases will be refused where unleased areas must necessarily be irrigated if a permit is granted. It is also contemplated to charge a higher rate where leases for less than five years are allowed. The new rules framed to carry out these objects are still under consideration.

73. The water-rate establishments on the Sone Canals were reorganized from the 1st of March 1892, the collections in the three districts of Patna, Gaya and Shahabad being placed in charge of one Special Deputy Collector

Revenue establishment on the Sone Canals.

instead of a separate staff being maintained for each district. The immediate reason for this step was the heavy arrears which had been allowed to accumulate in the Patna district and the gross irregularities culminating in heavy embezzlements which, on a special officer being deputed there, were found to have occurred. The collections under the new arrangements in this district amounted during the year to Rs. 1,51,662, against Rs. 52,610 in 1890-91.

74. The drought of the autumn of 1891 affected the rice crops very seriously, and the contrast between the magnificent outturn on the fields irrigated by the canals and the starved and stunted appearance of the crops

Increase in irrigation from the Sone Canals.

on lands not so irrigated, was a striking evidence to the benefits which the Shahabad district has received from this great undertaking. Nor were these benefits confined to the rice harvest, for the demand for water for winter crops was very great, and the large increase in rabi irrigation—191,750 acres, against 41,393 acres in the year preceding—testifies to the skill and activity with which the demand was supplied.

75. The increasing difficulty in maintaining intact the embankments in Bengal has for some years past forced itself on the attention of Government. The marginal lands

Embankments.

between the embankments and the river bank have been slowly raised by the deposit of silt, as also, in a lesser degree, the beds of the rivers themselves, so that not only has the waterway been diminished, necessitating a constant raising of the embankments, but the lands protected by the embankments are lower than the stream, and cannot now be drained into it. These evils have been accentuated in the lower portions of the delta where circular embankments were thrown up many years ago to protect tracts of land, with the result that those tracts are now many feet below the general level of the country. In two special cases action has been taken. The whole of the remaining embankments on the right bank of the Damodar above the Begua khal have been levelled, and the same step is now being taken with regard to some portions of the embankment on the right bank of the River Gumti in the Tippera district. Three other measures of a similar character are under consideration, viz.—

- (1) The abandonment of 32 miles of the Bhagirathi embankment in the district of Murshidabad, and the construction in their place of a chord line, about five miles in length, above the line of the Bhagwangola road.

(2) The removal of the Argowal and Udbadal circuit embankments and the improvement of the drainage channels in the Contai subdivision of the Midnapore district.

(3) The removal of certain embankments on both sides of the river Rupnarain.

76. It is probable that some decision will be come to as to the removal of the Bhagirathi embankment during the current year, but the interests involved in the remaining two projects are so great, involving the possible acquisition of large tracts of land which might be prejudicially affected, that no early determination in the course to be pursued can be looked for.

The Bengal Irrigation Manual was in course of revision during the year, but its issue was postponed owing to probable changes in the irrigation and navigation rules for Orissa and Midnapore. In the meantime a hand-book for the Sone Canals alone has been published.

Irrigation Manual.

RAILWAYS.

77. During the year three new projects have been put in hand. The *Western Duars Railway* is intended to serve the tea gardens of the Duars and put them in communication with the Eastern Bengal State Railway at Jalpaiguri. It is being constructed by a Company under a limited guarantee from the District Board, and is 30 miles in length. Construction commenced late in the year, and not much progress has been made. The *Kuch Bihar Railway* is being constructed at the cost of the Maharaja of that State, with the help of a loan of 8 lacs from the Government of India. Nearly half the work has been finished. A feeder line, about 35 miles in length, is being constructed from the *Barsoi* station of the Assam-Bihar Section of the Eastern Bengal State Railway to *Kishanganj* in the Purnea district. Construction was pushed on with great vigour, and though the work was only commenced in June, the rails were laid in December, and but for delay in sending out girders for the bridges, the line would have been completed before the end of the year. The estimated cost is about 14 lacs.

New railway projects under construction.

78. Several other projects have been under consideration during the year, but without any practical result as yet. The Lieutenant-Governor has urged on the Supreme Government the construction of two feeder lines, one from the Sakri station to Jainagar in the Darbhanga district, and one from the Sultanpore station to Bogra, the head-quarters of the district of that name, recommending them partly as famine relief works and partly for administrative and general reasons; but the recommendation has been unsuccessful. A short branch of 20 miles, connecting the town of Krishnagar with the Ranaghat station, is advocated by the District Board; and as they are ready to guarantee part of the interest on capital, it is probable that the necessary funds will shortly be raised. The Lieutenant-Governor has supported the proposal of the Bengal Central Railway Company to make an extension from Khulna to Madaripur, and has also given a qualified support to a scheme for a branch line from Magra on the East Indian Railway to Katwa on the Bhagirathi.

New railway projects under consideration.

79. The Tarakeswar-Magra Steam Tramway which is about to be constructed by the Bengal Provincial Railway Company, Limited, is interesting, as being the first under-

Tarakeswar-Magra Tramway.

taking of its kind to be carried out solely under native management. It will be a light railway of 2' 6" gauge, from Tarkeswar to the Magra station, a distance of 30½ miles, lying entirely within the Hooghly district. The preliminary steps have been gone through, and the necessary agreement entered into; steps are now being taken to acquire the land, and as soon as the promoters are put in possession of it, they intend to push on vigorously with the construction of the line.

80. To settle the long pending difficulty of the cost and delay caused by the steam ferry on the Ganges at Sara, a Committee was appointed comprising such distinguished experts in bridge building as Mr. O'Callaghan and Mr. J. R. Bell. They decided that a bridge was practicable, and that the banks could be protected against the erosion of the river, but the cost was estimated at 100 lacs of rupees, and the Government of India was unable to provide so large a sum.

81. The operations of the East Coast Railway commenced in the Puri and Cuttack districts, and the land has been acquired, but very little progress in earthwork has been made. This Railway is not under the control of the Bengal Government.

82. One of the conditions of the new Provincial Contract which began on 1st April 1892 involved a change in the relation of the Provincial Government to the Railways which have hitherto been under its financial control. The Government of India held that administrative difficulties had been caused by making over the management of State Railways to Local Governments; that the measure was one of decentralization in name only, as it had been found that Local Governments were unable to relieve the Public Works Department of the Government of India of any considerable amount of work in connection with the railways made Provincial, while the double control sometimes caused delay and difficulties; and under these circumstances it was suggested that the control of the railways should be centralized in the hands of the Government of India. It was proposed, however, that the Local Government should retain a financial interest in the working of the railways in the Province, and in order to ensure this, the offer was made that the Local and Imperial Governments should share equally in the net profits of these railways.

The Lieutenant-Governor replied that he fully concurred in the conclusions to which the Supreme Government had come, and in the reasons which had led to those conclusions. He had long felt that a Local Government is not sufficiently provided with experts on its establishment to enable it to deal properly with the many technical questions which arise in Railway administration, and that uniformity in the management of State Railways is above all things advisable. At the same time he considered that it was desirable that the Local Government should have some financial interest in the well-being of railways, which would stimulate it to encourage the development of traffic, and especially to foster the construction of feeder roads leading to the railway stations. On every ground therefore he cordially supported the proposal of the Government of India, and effect has been given to in the contract which has now been framed.

REVENUE AND FINANCE.

83. The total *Imperial Receipts* amounted to Rs. 13,35,26,473 in 1891-92 against Rs. 13,48,75,170 in 1890-91; there was an increase of Rs. 25,68,229 under nine major heads, and a decrease of Rs. 39,16,876 under four, so that there was a net decrease of Rs. 13,48,647. The heads under which the greater part of the increase took place are Opium, Salt, Stamps, Excise, Customs and Interest, and it is attributed, respectively, to the higher prices obtained at opium sales; to the larger quantity of salt having been taken out of bond; to the larger number of civil suits instituted during the year in almost all the districts in the Province; to the increased license fees from outstills and other excise shops; to larger imports of mineral oil, arms and ammunition, and larger exports of rice; and to the interest on additional loans granted to the Calcutta Port Trust for the Kiddorpore Docks. The decrease was almost entirely under Land Revenue, and was chiefly due to the absence of any special benevolence from the Provincial revenues, such as the contribution of ten lakhs taken in 1890-91; to the re-adjustment of the net earnings of the Bengal and North-Western Railway in favour of the Provincial revenues, against larger credits taken in the preceding year, and to contributions made in 1891-92 to reconp the Provincial revenues for additional expenditure incurred on account of survey and settlement operations and charges on account of the South Lushai Hills. The *expenditure* showed a net decrease of Rs. 21,53,643. There were increases amounting to Rs. 11,23,126 specially under Refunds and Drawbacks, Scientific and other Minor Departments, and Stationery and Printing, due to larger refunds of duty on arms and rice, to charges on account of census operations, and to larger demands for paper for census forms and Press works. Against these there was a decrease amounting to Rs. 32,76,769, of which Rs. 31,97,453 was under Opium, and was due to smaller payments having been made owing to smaller outturn of the crop.

84. The balance of *Currency Notes* in the treasuries rose from Rs. 41,73,320 at the beginning of the year to Rs. 45,71,180 at the close, being an increase of Rs. 3,97,860. During the year the value of notes supplied to the district treasuries to meet local requirements was Rs. 17,00,500, against Rs. 25,80,650 in the previous year. The decrease was chiefly due to smaller supplies to the treasuries at Bankura, Chittagong, Gaya, Hazáribágh, Singhbhum, and Manbhum. The supplies to the two last-mentioned treasuries were exceptionally large in 1890-91 to meet requirements of the Bengal-Nagpur Railway. Howrah, the 24-Parganas, the Calcutta Collectorate, and the Calcutta income-tax treasuries remitted to the Bank of Bengal notes amounting to Rs. 71,49,955, against Rs. 64,99,790 in 1890-91. The total amount of the remittances in surplus notes made to Calcutta by all the district treasuries in the Province amounted to Rs. 1,45,66,100, against Rs. 1,20,05,425. The total value of the notes received from the public in payment of Government dues amounted to Rs. 2,90,01,185, and was considerably larger than in any of the previous ten years, while the value of notes issued to the public in payment of claims against Government was Rs. 1,20,11,010, which was higher than in any of the previous ten years except in 1889-90, when the exceptionally high figure of Rs. 1,26,53,350 was reached.

85. The following table compares the approximate actuals for 1891-92 with the latest estimates adopted by the Government of India:—

Provincial finance.

RECEIPTS.	Revised estimate, 1891-92, adopted by the Government of India.	Approximate actuals, 1891-92.	EXPENDITURE.	Revised estimate, 1891-92, adopted by the Government of India.	Approximate actuals, 1891-92.
Opening balance	Rs. 28,73,000	Rs. 28,73,774	Direct demand on the Revenue—	Rs.	Rs.
Principal Heads of Revenue—			1. Refunds and drawbacks	1,59,000	1,51,254
I.—Land Revenue { Proper	89,63,000	1,06,21,050	2. Assessments and compensations	1,05,000	1,06,129
III.—Sale	+10,41,000	+13,35,108	3. Land Revenue	20,50,000	20,48,857
IV.—Stamp	1,25,000	1,10,958	4. Salt	20,000	31,000
V.—Excise	1,11,75,000	1,17,25,346	5. Stamps	3,15,000	3,37,725
VI.—Provincial rates	27,81,000	27,81,420	6. Excise	1,25,000	1,26,415
VII.—Customs	41,50,000	41,27,424	7. Provincial Rates	4,20,000	4,27,057
VIII.—Assessed taxes	58,000	57,165	8. Customs	5,25,000	5,18,741
IX.—Forts	21,50,000	21,53,188	9. Assessed taxes	10,000	10,004
X.—Forts	4,07,000	3,94,773	10. Patents	3,10,000	2,10,357
X.—Registration	6,02,000	6,07,116	11. Registration	3,15,000	3,11,207
Total	3,08,61,000	3,33,85,040	Total	64,30,000	65,28,502
XII.—Interest	1,23,000	1,19,713	12. Interest on ordinary debt	65,000	1,02,072
Receipts by Civil Department—			13. Post Office .. ..	.. ..	4,824
XIV.—Law and Justice—			Salaries and expenses of Civil Department—		
Courts of Law	8,50,000	8,83,000	14. General Administration	10,00,000	10,15,280
Jails	4,50,000	4,27,070	15. Law and Justice (Courts of Law	24,10,000	24,22,507
XV.—Police	4,25,000	4,48,000	16. Jails	20,55,000	20,21,857
XVI.—Munici-	10,00,000	9,83,100	17. Police	15,00,000	15,00,113
XVII.—Education	6,00,000	6,25,138	18. Marine	5,00,000	0 12,000
XVIII.—Medical	1,50,000	1,46,508	19. Education	25,65,000	25,51,554
XIX.—Scientific and other Minor Departments	1,25,000	1,00,000	20. Medical	15,00,000	15,00,103
Total	40,73,000	41,61,513	21. Political	12,000	34,503
Miscellaneous—			22. Scientific and other Minor Departments	3,00,000	3,11,518
XXII.—Receipt in aid of superannuation	1,17,000	1,26,700	Total	2,02,55,000	2,04,78,200
XXIII.—Stationery and Printing	1,41,000	1,27,204	Disbursements—		
XXIV.—Miscellaneous	8,63,000	8,96,179	23. Superannuation, &c.	15,80,000	15,00,255
Total	11,21,000	11,20,084	24. Stationery and Printing	15,00,000	13,14,500
Railways—			25. Miscellaneous	2,07,000	2,01,751
XXV.—State Railways (gross earnings)	1,05,00,000	1,00,20,548	Total	30,14,000	32,16,506
Irrigation—			Public Relief and Insurance—		
XXIX.—Major works (direct receipts)	14,42,000	16,08,710	26. Public relief	5,000	.. ..
XXX.—Minor works and navigation—			27. Construction of Railways	14,000	7,100
By Public Works Department	8,25,000	8,12,204	Railways (Revenue account)—		
By Civil Department	1,00,000	1,17,704	28. State Railways—		
Total	23,40,000	25,38,417	Working expenses	1,04,25,000	1,01,66,808
Buildings and Roads—			Interest on debt	30,00,000	28,00,000
XXXII.—Civil Works—			29. Subsidized Companies—		
By Public Works Department	1,00,000	1,00,000	Land, &c.	3,000	1,358
By Civil Department	2,00,000	2,47,083	30. Miscellaneous Railway expendi-	75,000	78,100
Total	4,00,000	4,47,083	Total	1,42,02,000	1,42,40,377
Total receipts of the year	5,03,02,000	5,77,63,700	Irrigation—		
GRAND TOTAL INCLUDING OPENING BALANCE	5,34,05,000	6,05,20,444	31. Major works—		
			Working expenses	14,25,000	13,84,111
			Interest on debt	24,00,000	24,00,101
			32. Minor Works and Navigation—		
			By Public Works Department	10,00,000	10,00,700
			By Civil Department	2,000	14,503
			Total	12,00,000	10,15,203
			Buildings and Roads—		
			33. Civil Works—		
			By Public Works Department	37,43,000	39,80,134
			By Civil Department	2,11,000	1,20,519
			Total	39,54,000	41,00,653
			Contributions	8,75,000	8,75,000
			Total expenditure of the year	6,74,05,000	6,78,65,483
			Closing balance	20,00,000	23,72,000
			GRAND TOTAL	5,94,05,000	6,02,37,483

86. Taking the Civil and Public Works heads together, the Provincial receipts of the year amounted to Rs. 5,77,63,720, against the revised estimate of Rs. 5,69,92,000, and the Provincial expenditure aggregated Rs. 5,78,63,585, against the estimate of Rs. 5,74,65,000. The revised estimate allowed for a special contribution of 3½ lakhs from Imperial to Provincial, to make up the Provincial balance of 20 lakhs, which, under the orders of the Government of India, the Government of Bengal is ordinarily bound to maintain. No such grant was, however, necessary, as an unanticipated increase occurred in almost all principal revenue heads in the last two months of the year. The main cause of the improvement in the financial position of the Province was the increase in the Provincial share of receipts under Railways, as the following statement will show:—

RECEIPTS.		Estimate passed by the Government of India, 1891-92.	Approximate actuals, 1891-92.
		Rs.	Rs.
Eastern Bengal State Railway	...	70,90,000	68,41,226
Other sections of the Eastern Bengal System	..	43,60,000	46,22,800
Nalhati	...	90,000	92,353
Tirhut and Bengal and North-Western Railway	..	48,60,000	48,88,540
		<hr/> 1,63,90,000	<hr/> 1,64,44,729
<i>Deduct—Imperial share of the receipts from Eastern Bengal State Railway (Proper), being excess over 30 lakhs of the net earnings of the Railway</i>			
	...	8,25,000	4,05,180
	Total	<hr/> 1,55,65,000	<hr/> 1,60,39,548
 CHARGES.			
Eastern Bengal State Railway	...	32,65,000	34,36,046
Other sections of the Eastern Bengal System	...	28,85,000	28,26,747
Nalhati	...	60,000	48,177
Tirhut and Bengal and North-Western Railway	...	42,35,000	41,54,598
	Total	<hr/> 1,04,35,000	<hr/> 1,04,65,568
	Net receipts	<hr/> 51,30,000	<hr/> 55,73,680

The charges of the Eastern Bengal State Railway (Proper) amounted to Rs. 34,36,046, against Rs. 32,65,000 passed by the Government of India in the revised estimate. The increase was due to the adjustment of the claim of the East Indian Railway Company for arrear freight on coal amounting to Rs. 2,21,102. This increase in expenditure on the broad gauge section, as well as the decrease in receipts from that section, resulted in a credit of Rs. 4,05,180 only to the Imperial revenues, against the estimate of Rs. 8,25,000, as the Imperial share is limited to any excess over 30 lakhs of the net earnings of Eastern Bengal State Railway (Proper). Thus, while the gross receipts and charges under Railways exceeded the revised estimates only by Rs. 54,728 and Rs. 30,868 respectively, and the net earnings by Rs. 23,860, the reduction of the Imperial share in those earnings benefited the Provincial revenues to the extent of nearly Rs. 4¼ lakhs.

The revenue derived from the canals classed as Irrigation Major Works amounted to Rs. 16,02,710, against Rs. 14,42,000 provided for in the revised estimate. The excess was due chiefly to larger collections of water-rates.

The heads of revenue and receipts in the Civil Department which chiefly contributed to the increase were Land Revenue (Rs. 58,000), Stamps (Rs. 1,50,000), Excise (Rs. 46,000), Provincial Rates (Rs. 1,43,000) and Jails (Rs. 78,000).

87. The total expenditure exceeded the revised estimate by Rs. 3,98,585, and the chief fluctuations are explained below:—

Land Revenue.—The Accountant-General's approximate account showed that the total expenditure under this head, exclusive of charges for professional surveys, amounted to Rs. 37,06,944, against the revised estimate of Rs. 39,50,000 including those charges. The adjustment for these charges between Imperial and Provincial has not yet been finally made, but the figures communicated by the Comptroller of the Indian Treasuries show that the Provincial share of these charges amounted to Rs. 3,81,933, against Rs. 4,76,000 included in the estimate. The total under Land Revenue thus amounted to Rs. 40,88,877.

Post Office.—The charges, amounting to Rs. 4,498, shown under this head were for the conveyance of mails in the South Lushai Hills, for which no provision was made under this head, the charge being taken under Land Revenue—District Administration.

Law and Justice, Courts of Law.—The actual charges under the heads of (a) "Law Officers," (b) "Civil and Sessions Courts," and (c) "Refunds" exceeded the estimates by Rs. 18,000, Rs. 29,000, and Rs. 13,000, respectively. The increase under (a) was due to the adjustment of large payments in Calcutta for conducting certain important law suits.

Police.—The revised estimate under this head was Rs. 58,31,000, but the total expenditure amounted to Rs. 59,53,113. The excess was under "Village Police" (Rs. 16,000), "Special Police" (Rs. 64,000), and "Refunds" (Rs. 50,000), the increase under the first head being due to the extension of Act V of 1887 to the district of Lohardaga, and that under the second to heavier expenditure in the South Lushai Hills.

Political.—There was larger expenditure under "Darbar Presents," and the total charges amounted to Rs. 34,505, against the revised estimate of Rs. 12,000. The increase was on account of khillats purchased for presentation to the recipients of titles sanctioned after the revised estimate had been passed.

Stationery and Printing.—The original budget estimate under this head, amounting to Rs. 10,18,000, was raised by the Government of India to Rs. 13,09,000 on information furnished by the Superintendent of Stationery for a large increase of expenditure under "Stationery supplied from Central Stores." The actual charges amounted to Rs. 13,34,930, the increase being due to increased charges on account of rent of godowns and office expenses and miscellaneous, consequent on increased purchases and larger supplies of stationery.

Miscellaneous.—There was an increase of expenditure under "Donations for charitable purposes" (Rs. 25,000), due entirely to the larger payment on account of the contribution to the Calcutta Female Nurses' Institution made at the close of the year, and under "Miscellaneous and unforeseen charges" (Rs. 54,000), chiefly on account of the irrecoverable balance of embankment advances made in the district of Muzaffarpur from 1877 to 1882, amounting

to Rs. 42,000, written off under the order of Government to debit of this head. The total expenditure amounted to Rs. 2,94,751 against Rs. 2,07,000, the revised estimate.

Irrigation Major Works.—An expenditure of Rs. 13,54,171 was incurred on account of the working expenses of the canals, against Rs. 14,23,000 provided for in the revised estimate. The saving was mainly under the following heads :—

				Revised estimate.	Actuals.
				Rs.	Rs.
Midnapore Canal—					
Establishment	...	...	...	75,000	64,301
Sone Project—					
Extensions	...	...	...	8,000	3,812
Repairs	...	...	...	2,71,000	2,59,804
Establishment	...	...	...	3,91,000	3,56,573
Refunds of Revenue	...	...	...	13,000	8,980
			Total	7,58,000	6,92,470

Minor Works and Navigation.—The works in charge of the Public Works Department cost Rs. 15,59,796, against Rs. 16,84,000 provided for in the revised estimate passed by the Government of India. The decrease was mainly for smaller expenditure on the Hijili Tidal Canal and under Agricultural Works. There was, however, an increase of expenditure on Minor Works under Civil Department, which was nominal, being due to the charges, amounting to Rs. 12,638, on account of the Dankuni canal, originally treated as drainage advances, and included under "Loans and Advances," having been written back and adjusted by debit to this head, the amount being now included in, and recoverable along with, the capitalized maintenance charges of the Dankuni drainage scheme. An increase of nearly the same amount occurred on the receipt side.

Civil Works in charge of the Public Works Department.—The increase under this head was Rs. 1,37,194, due principally to the increase of stock in the First Calcutta Division caused by the purchase of bricks from the lessee of the Government factory at Akra.

Civil Works in charge of Civil Officers.—The charges under this head aggregated Rs. 1,50,209, against Rs. 2,11,000 passed by the Government of India in the revised estimate. The details are—

				Revised estimate.	Actuals.
				Rs.	Rs.
Ferries	...	...	...	19,000	4,608
Works in Lushai	...	...	...	1,10,000	86,878
Contributions	...	...	...	62,000	26,699
Refunds	...	...	...	20,000	32,124
			Total	2,11,000	1,50,209

A provision of Rs. 25,000 was made in the budget for contribution to the Khulna Municipality for improvements of the town, but the grant was not drawn in that year.

Towards the close of the year, some discussion took place between the Local and Imperial Governments as to the probable closing balance of 1891-92. After several different estimates had been put forward, the Government of India adopted Rs. 16,68,000, and undertook to contribute the amount necessary to make up the prescribed minimum. As a matter of fact, no contribution was needed, for the closing balance, as shown above, amounted to Rs. 23,72,909, and this increase arose from natural causes. The chief point upon which the discussion turned was the adjustment of the charges for the administration of the South Lushai Hills, survey and settlement, and Tirhut State Railway, during the previous five years.

In March 1892 the terms of the Provincial contract for the next five years were settled by the Government of India. The history of this question belongs, however, to the financial year 1892-93.

88. There are five *Incorporated Local Funds*: the *District Road Fund* in the districts of Házaribágh, Lohardaga, Manbhum, and Darjeeling, to which the provisions of the Local Self-Government Act have not been extended; the *District Road Account* in three districts in which the Cess Act is not in force, viz., Singhbhum, the Sonthal Parganas, and the Chittagong Hill Tracts; the *District Fund* in the remaining thirty-eight districts to which the Local Self-Government Act is in force; the *District Post Fund*, which is maintained by the zamindari dák cess; and the *Inland Labour Transport Fund*, the receipts of which are derived from various fees levied under the Act, and any deficit in which is debited to the Assam portion of the Fund. The receipts of these funds amounted to Rs. 81,72,692 and the expenditure to Rs. 82,27,775, so that the balance in hand decreased by Rs. 55,083. The local funds the transactions of which appear in the Government account books, but which are not included as part of the receipts and expenditure of the Province, are known as *Excluded Local Funds*. The total receipts from these funds, including those from Municipalities, and Chittagong Port Trust, amounted to Rs. 23,77,527, and the expenditure to Rs. 23,63,300; and the closing balance was Rs. 6,16,200, as against Rs. 6,02,033, the opening balance of the year.

89. As in previous years, the *Road and Public Works Cesses* were levied at maximum rates in all districts where Bengal Act IX of 1880 was in force, except in Backergunge, where the Road Cess was levied at half of the maximum rate, the Public Works Cess being levied at full rates. The reason which first led in 1877-78 to the reduction of the road cess in Backergunge to half the rate was the distress caused by the cyclone of October 1876. In 1882-83 the reduced rate was continued in consideration of the low price of grain and the heavy losses sustained from cattle disease. These reasons have long spent their force, but the opposition of members of the District Committee, and subsequently of the District Board, who represent the zamindari interests of the district, reverted an increase in the rate. The attention of the Commissioner of Dacca has been drawn to the matter with a view to inducing the District Board to abandon a position which is no longer justifiable. The total current demand for Road and Public Works Cesses for the year under report was Rs. 70,67,933, and the arrear demand Rs. 19,44,615, so that the gross demand was Rs. 90,12,548. The total collections amounted to Rs. 80,61,032. The percentage of arrear collections on arrear demand was 70·6, and of current collections on current demand was 83·3. The year closed with an arrear balance of Rs. 18,35,454.

In only 11 districts both current and arrear collections exceeded 90 per cent. The gross rental rose from Rs. 13,11,68,432 at first assessment, when the road cess was introduced, to Rs. 14,60,45,236 in 1890-91 and Rs. 14,78,83,221 in 1891-92. The districts of Purnea, Muzaffarpur, Hazáribágh, Lohardaga, Paláman, and Singhbhum have been completely re-valued, while partial valuations and re-valuations have been completed in 13 other districts.

LAND REVENUE.

90. The attention of the Government was drawn to the comparatively large outstanding balances of land revenue which ought, it might be thought, to be more punctually collected in a permanently-settled province than in provinces where the settlement is temporary and fluctuating. On a review of the collections of the 15 years from 1875-76 to 1889-90, it was found that though demands on account of land revenue were ultimately almost fully realized, and Government suffered but little actual loss, yet the balances, whether of current demand or arrears, had increased to the amount of some lakhs. It became necessary, therefore, to remind district officers of the old tradition that the first business of a Collector is to collect, and that it is his paramount duty to insist on the punctual payment of the demands due to Government. The standard of collection to which Government expects all Collectors to conform was raised. In future a satisfactory explanation will have to be furnished where the collections do not reach 90 per cent. for permanently-settled estates, 95 per cent. for estates temporarily settled with the proprietors for definite periods, 93 per cent. for *miyotwari* tracts, and 90 per cent. for temporarily-settled estates managed direct or *furnad* and for Government estates. In order that the result of the collections may stand out free from any complications caused by technicalities of account, it has been ruled that items which are either irrecoverable or not recoverable within the year shall be excluded from the current demand, so that there may be no fictitious arrears to swell the outstanding balance at the end of the year.

91. In connection with the question, discussed in the preceding paragraph, of the heavy arrears occurring under the present system in the collection of the yearly land revenue, the Lieutenant-Governor caused an examination to be made of the dates fixed for the payment of the periodical kists or instalments. These were considered by the Board and by Government in 1874 and fixed by a Resolution of the Board in 1875, which decided the dates and amounts of the kists in every district in Bengal, the general rule being that large estates were made to pay in four kists, those not so large in three, smaller ones in two, while for the smallest of all only one date of payment was prescribed. This distribution of the demand was challenged by the Famine Commission in 1878, on the ground that it conflicted with the principle that the instalments should correspond to the number of the main crops, to the average dates when those crops come to maturity, and to the relative weight and value of the harvest, but no alteration was made. Sir Charles Elliott, however, re-examined the dates fixed, and came to the conclusion that the kists at present prescribed are not only unnecessarily numerous, but also unsuitable in point of time and of relative amount, having regard to the seasons and relative quantities of the three principal harvests prevailing throughout Bengal, which are reaped in

Collection of land revenue in Bengal.

Proposed change of days for paying instalments of land revenue.

the months of September, December, and February or March. In his opinion the land revenue should be paid in not more than three instalments, since there are but three principal harvests in the year, and as the early rain crop is mostly employed for consumption, not for sale, he believed that two instalments would be preferable to three. He suggested to the Board of Revenue (1) that not more than two instalments should be demanded for any estate, and, in order to suit the convenience of the revenue payers, only one instalment from estates paying less than Rs. 50; (2) that the *aman* or cold-weather rice crop should bear the chief weight of the land revenue, and the instalment paid from it on 1st March should be properly about two-thirds of the whole; (3) that the second instalment of one-third should be imposed on the *aus* or early rain crop or the *rabi* or spring crop, according to which is heaviest, and, where they are nearly equal in quantity, it should not be imposed on the one which is mainly consumed, but on the crop which is mostly sold in the market. He pointed out that it was not necessary to conflict in any way with the legal limitation of the instalment dates fixed in the original settlement; all that is necessary is to see that the amount of revenue due on the newly proposed kist days do not exceed the amount legally due in the Bengali months preceding that date. The whole subject is still under consideration.

92. The system under which land revenue is paid into district offices engaged the attention of Government in connection, in the first instance, with certain frauds discovered in the Tauzi Department of the Muzaffarpur Collectorate. These frauds were cleverly contrived by two clerks who helped to write up the estates' ledger, one of whom, Sitarom, the worst offender, has been convicted under the Penal Code and sentenced to undergo a long term of imprisonment and in addition to pay a heavy fine. More dangerous forms of fraud discovered in the Champaran Collectorate suggested to the Lieutenant-Governor that it was incumbent upon him to take action with regard to the present working of Collectors' offices in this their most important department, and that the whole system of payment of revenue and revenue accounts required thorough overhauling. There being no precise rules on the subject, various practices had sprung up in different districts, and it was evident that much would be gained by putting an end to this state of things and laying down a uniform procedure. The subject presented itself to Sir Charles Elliott in two different aspects, regard being had, on the one hand, to the possibility of improving the arrangements for payment and credit in the Tauzi Department of Collectorate offices, so as to secure expedition in payment of revenue, economy of establishments, and simplicity in showing all demands against an estate, as far as may be, in a single register, and on the other hand, to the provision of more efficient checks against fraud.

With a view, therefore, to a thorough examination being made of existing systems and proposals for reform, the Lieutenant-Governor in December 1891 placed Mr. W. C. Macpherson, c.s., on special duty under the Board for such time as might be necessary, with precise instructions as to the points to the elucidation of which his inquiries should be directed. Since the close of the year a full report has been received from Mr. Macpherson, but before dealing with it the Lieutenant-Governor has desired him to visit the North-Western Provinces for the purpose of examining the system of tauzi procedure in force there.

93. The attention of Government was directed during the year to the improvement of the administration of the land revenue by a number of small alterations in the existing practice of the Collectorate offices. It was suggested, for instance, that much time and labour might be saved by a new form of Revenue-roll Register which could be carried on for a number of years, so as to avoid the necessity of re-writing at the beginning of each new year. The amalgamation of the road cess and zamindari dák cess demand with the revenue demand was also suggested as a means of saving time and trouble. Registers for checking the progress of settlement cases and for enabling inspecting officers to see with readiness the state of work in collectorate and magisterial record-rooms were prescribed during the year, together with an inspection book in which to record in serial order the remarks of all inspecting officers with a view to continuity of administration. The improvement of the ministerial staff of the districts also attracted the attention of Government, and steps were taken to ensure that, where possible, future appointments should be made with a view to eventually securing a staff of clerks in all offices who will be able to keep their registers and conduct ordinary correspondence in the English language.

94. The fourfold classification of estates hitherto adopted under the orders of Sir George Campbell for the purposes of land revenue administration appeared to be wanting in logical arrangement, and has been superseded by order of Government. The ráiyatwari tracts, which under the old rules formed a separate class, have been merged with the estates owned by Government as proprietor, from which they differed only in point of size; and estates under the direct management of Government, owing to the recusancy of proprietors, which were formerly included among temporarily-settled estates, a term which it was a misnomer to apply to them, have also been transferred to their proper place in class III. There will therefore be, henceforth, a threefold classification as follows:—

I.—Permanently-settled estates.

II.—Temporarily-settled estates—

- (a) Those settled with proprietors for periods.
- (b) Private estates leased to farmers for periods.
- (c) Government estates leased to farmers for periods.

III.—Estates held direct by Government, viz.—

- (a) Those managed for proprietors.
- (b) Those owned by Government as proprietor.

95. The Land Revenue Administration Report for the year 1890-91, submitted to Government by the Board of Revenue, showed that there were eighteen hundred and sixty-one Government estates under direct management. Many of these are so small and scattered that they are left entirely in the hands of Sub-Deputy Collectors and kánungos with but little supervision from the Collector or Subdivisional Officer. Under these circumstances, it is erroneous to suppose that they can afford a training ground for young Civilians, or in any way repay the trouble involved in their management. The Lieutenant-Governor has, therefore, considered it desirable that estates of small value should be sold or farmed out for short terms in every case where a fair price

can be obtained, and where no special reason for their retention exists. To justify the direct management of such estates by Government, it is not enough that they should be able to support a tahsildari establishment, but they should be so large, so compact, and of such a nature that they can be easily and efficiently managed by a good tahsildar and supervised by the Collector or Subdivisional Officer. Lands subject to diluvion (diāra lands) are, however, subject to special exceptions. The Lieutenant-Governor has directed the Board to issue orders in conformity with these principles, after a consideration of any special circumstances which may exist in each case.

RECOVERY OF GOVERNMENT DEMANDS.

96. It came to the Lieutenant-Governor's notice that general and reasonable complaints were made as to the delay in carrying out the certificate process and recovering the arrears due to the State, and that Register No. 10, prescribed by the Board for recording the results of certificates under the Public Demands Recovery Act, VII (B.C.) of 1880, failed to show at a glance what progress had been made and what stage had been reached in any case, and thus partly contributed to the delays complained of and to general laxity in the supervision of the certificate procedure. A revised form was accordingly suggested to the Board, and has been issued by them with some modifications which had received the previous approval of the Lieutenant-Governor. The aim of the new form is to enable an inspecting officer to discover at once the progress made in each case, the fact of delay, and the stage at which the delay occurs, leaving the precise cause to be ascertained from the order-sheet attached to the record and the record itself. There is to be a separate volume for each department, in which a large number of certificates are issued, such as road cess, wards' estates, &c., and also for large Government or wards' estates individually, as may be found convenient in each district.

SURVEYS AND SETTLEMENTS.

97. At the beginning of the year 1891-92 three important survey-settlements involving the assessment of land revenue in temporarily-settled estates were in hand; these were the settlements of the Western Duars in the Jalpaiguri district under Mr. D. Sunder, Deputy Magistrate and Deputy Collector; of the Chittagong district under Mr. F. A. Slack, c.s., and of the Puri and Cuttack districts of Orissa under Mr. H. H. Reilly, Deputy Magistrate and Deputy Collector. In all these cases the survey is a cadastral one, and is carried out under officers of the Survey Department. Similar work on a smaller scale was in progress in the Government estates in Backergunge, Tippera, Noakhali, and Midnapore. The survey-settlement of several important Wards' estates, viz., Churaman, Maldwar, Shankarpur, and Srinagar-Banaili, had been concluded, and the final reports of the three first came under review by Government during the year. Portions of the Raja of Bardwan's estate under the Court of Wards in Hukumapur (Birbhum), Sujamatha, and elsewhere were also under survey-settlement. The survey of the two large permanently-settled estates (locally called Killas) of Kujong and Kanika in Orissa, both under the Court of Wards, had been done, but the settlement was still unfinished. A number of private estates in Midnapore were also

under survey and settlement. The work in the Dubalhati Raja's estate in Rajshahi was completed in August 1891, and eighteen private estates of zamindars in the Sonthal Parganas were also under survey and measurement for the fixation of rents. In short, the survey-settlement work in hand on the 1st April 1891 was more extended in area and more varied in description than at any previous period. Sir Charles Elliott found it necessary to strengthen the staff of officers in superior and subordinate charge of settlement operations by the deputation thereto, especially in Orissa and Chittagong, of several Covenanted Civilians and members of the Statutory Civil Service, as well as a large number of Deputy and Sub-Deputy Collectors. Early in April 1891, His Honour inspected the progress of the settlement of the Western Duars in Jalpaiguri, of the Srinagar-Banaili estate in the Purnea district, and of the Sonthal Parganas. He deemed it necessary to state at greater length, after these inspections, his views of the duties of a settlement officer, explaining that they are not limited to the judicial decision of a certain number of cases, but should include the investigation of agricultural and economic facts relating to the area under survey and settlement, and the accumulation of information by original and spontaneous enquiry, from which the data for reasonable assessment, whether of fair rents in the Wards' estates or of the land revenue in temporarily-settled estates, could properly be deduced. The principles laid down by the Lieutenant-Governor were duly circulated by the Board of Revenue as rules for the guidance of settlement officers, and incorporated in the Settlement Manual. As the chain of subordination of the several authorities connected with settlements is likely to become unnecessarily long, and thereby increase the difficulties of administrative control, it has been found necessary to consider in each case what course should be followed. The ordinary line through which the correspondence passes is from the Settlement Officer to the Commissioner, the Director of Land Records, the Board of Revenue, to Government. But in some cases the Commissioner, in some the Director, and in some the Board, have been dropped out of the chain. In September 1891 the Lieutenant-Governor issued orders that in future the Director of Land Records should furnish two settlement reports in the course of the year, viz., the first, financial, for the period from the 1st April to the 31st March, consisting of a brief, mainly statistical and financial, account of the progress of settlement work; and, the second, administrative, for the period from the 1st October to the 30th September, containing a full account of the progress of survey and settlement work in the Province. The first administrative report received under this arrangement has dealt with the year ending the 30th September 1891. Up to that date the work done in the principal settlements in progress was as follows.

98. In the Western Duars 765 square miles had been cadastrally surveyed, being practically the whole of the area under settlement. Besides this, 174 miles of forest and 61 of waste lands had been surveyed, leaving

The settlement of the Western Duars.

290 of forest and 340 of waste lands, all of which was completed before the setting in of the rains; and the survey party has now left the district. The settlement officer had completed his assessment of the Mainaguri tahsil, but the approval of the Commissioner was delayed pending some further enquiries. The assessment has resulted in a considerable increase of revenue from Rs. 77,000 to above Rs. 1,40,000, chiefly due to the extension of cultivation and to the application of new rates of assessment which were fixed by

Government in October 1890, and somewhat modified by Sir Charles Elliott on his visit to Jalpaiguri in April 1891, discretion being left to the Commissioner to deal with particular cases. The cost of the survey during the year was about Rs. 1,05,000, and the expenditure on settlement about Rs. 30,000. The unhealthy climate of the Duars necessitated several changes among the subordinate settlement officers, and largely enhanced the cost of the operations. The new rates of assessment were to have taken effect from the 1st April 1891, but, in consequence of the unfavourable character of the harvest, they were not enforced during the year.

99. Good progress has been made with this important settlement. Early in the year a revised estimate of cost, amounting to Rs. 5,57,920, and made up of Rs. 2,91,012 under the head of survey and Rs. 2,66,908 under the head of settlement, was accepted by the Lieutenant-Governor, who at the same time gave his sanction to a revised programme, according to which the operations should be completed in 1894. The necessity of exacting a full outturn of work from subordinates in order to secure this result was pointed out both to the Director of Agriculture and the Settlement Officer. The Survey Party nearly completed cadastral work in the Sadar subdivision and had quite finished it before the season closed; only some topographical work and the field survey of the Cox's Bazar subdivision now remain. The following statement shows the survey work (a) done in the Sadar and Cox's Bazar subdivisions during the first six months (October 1891 to March 1892) of the survey year 1891-92, and (b) remaining to be done on the 1st April 1892:—

	TRAPPESE SURVEY.		CADASTRAL SURVEY.		Villages forwarded to the Settlement Officer.	Expenditure during financial year 1891-92.
	Villages.	Square miles.	Villages.	Square miles.		
Completed during the six months October 1891 to March 1892 ...						
... { Sadar subdivision	137	103	329	40	102 for khaspore ... 204 acres and tracts complete.	Rs. 1,05,115 A. P. 1 0
... { Cox's Bazar subdivision	13	40	1	0		
Remaining to be done on the 1st April 1892 ...						
... { Sadar subdivision	Nil	Nil	09	107	179 for khaspore ... 450 acres and tracts.	.....
... { Cox's Bazar subdivision	94	79	5	20		

The settlement progress must be noticed in three main portions. In Thána Ramu under one Deputy Collector attestation was completed, fair rents decided, and information preparatory to assessment collected, but the assessment itself was not commenced. In the Sadar subdivision six Deputy and Sub-Deputy Collectors have been at work on the attestation of the entries in the survey papers and on the decision of fair rents: out of about 220,000 entries, 146,000 had been attested by the end of March. Some progress, but not much, had been made in collecting data for assessment. In Cox's Bazar subdivision, where the survey has only just broken ground, no settlement work was begun.

In order to provide for the maintenance of the settlement records, a scheme has been prepared for making the present tahsil muharrirs, who are employed to collect the rents of the jotdars, carry out the work ordinarily done by village pátwaris. In the event of this arrangement being carried out, the additional duties imposed upon them will be to record changes of occupancy among the jotdars and in the names of talukdars and their raiyats.

100. Opportunity has been taken during the course of this settlement to define and settle the status and incidents of "Noabad taluks." When the Permanent Settlement was made in 1793, it was based on a rough measurement; those persons who were found in possession of cultivated lands were settled with as tarafdars; the rest of the district was Government waste; and as by degrees population flowed over into and occupied these waste lands, leases were given to them, and they were called talukdars, and their lands "Noabad taluks." The talukdars differ from the tarafdars of Chittagong mainly in the date of their origin. The talukdar was a proprietor paying Government revenue, but, under the nomenclature of Act VII (B.C.) of 1868, his holding was termed a tenure. But when the Bengal Tenancy Act came into force, it was found that the definitions of tenure and tenure-holder, as therein laid down, were inapplicable to these taluks, and it has therefore been declared that the talukdars are proprietors of their estates under the Tenancy Act, paying revenue which has to be assessed by the Settlement Officers of Government, and not rent which may be the subject of appellate proceedings in the Civil Court. In order to remove any ambiguity that might arise from this confusion of terms, the incidents and conditions attaching to Noabad taluks have been placed on official record, and a clause has been inserted in the kabuliyats to be executed by the talukdars, accepting those conditions and incidents. The assessment is to be fixed at 70 per cent. of the gross assets of the estate, the latter being calculated on the rents actually paid by the raiyats, and on those which would be payable by the talukdars themselves according to the same rate on the lands in their own possession. The settlement will probably be fixed for a term of 30 years.

101. The survey and settlement operations in Orissa cover the three districts of Puri, Cuttack, and Balasore with the exception of a certain number of permanently-settled estates known as "killas." The survey was begun under Mr. Patterson, and 1,017 miles were cadastrally surveyed by the close of the season in May 1891, but there was great delay in the preparation of the records, and many errors have been found in the recorded entries to the great embarrassment of the Settlement Department. When the survey took the field again in November 1891, it was placed under Colonel Sandeman as Director of Surveys, and Lieutenant Crichton, R.E., as Superintendent, and since then the progress has been more satisfactory. About 1,400 square miles of cadastral work were completed by June 1892, leaving about 2,200 to be done, or nearly 1½ years' work; the traverse survey has been pushed on in advance so as to have everything ready for the cadastral parties in the ensuing season; almost all the arrear records have been compiled and sent in, and good progress has been made with the records of the villages surveyed this year, so that there is reason to hope that when the Settlement Department takes the field again, it will be in possession of the maps and field records of all villages surveyed in the preceding season.

Mr. Reily was appointed Settlement Officer in February 1891, but little progress with the settlement could be made during that season, because of the delays and errors of the survey officers, and the same cause has seriously hampered the work during the period under review, the season of 1891-92. Mr. Reily's hands have been strengthened by a strong staff, nine assistants

having been placed under him, of whom three are Covenanted Civilians and three are Statutory Civilians. The principal work done during the year by these officers was the attestation of the entries relating to the areas occupied by and the rents paid by them, and the preparation of data for assessment. In the field-season ending with June 1892, attestation has been completed for 2,325 villages, and data for assessment purposes were prepared for 1,056 villages. No reports on the proposed assessment rates have yet been received.

102. The extension of the Tenancy Act, VIII of 1885, to Orissa has long been under discussion, and its necessity was accentuated by the desirability of utilising that portion of the Act—Chapter X—which deals with settlement operations. Accordingly that chapter, as well as the portions which deal with the tenures and rights of different classes of tenants, were extended to the Orissa Division. But no change was made in the system under which rent suits are heard by the Deputy Collectors, and not by the Munsifs.

Extension of the Tenancy Act to Orissa.

103. The settlement of the Khurda Government estate in Puri was completed in 1880, and in 1888 the Government prescribed a system under which the settlement records should be corrected from time to time at head-quarters, these corrections being based on the compulsory registration of all transfers by the raiyats concerned. After an experience of more than three years, the Board reported in January 1892 that, while the local officers were in favour of continuing the system, the Director of Land Records was of opinion that the process should be inverted, so that information regarding transfers and new cultivation should be recorded in the first instance by the sarbaráhkárs (or village officers), and by them communicated to the Sadar establishment. The Board supported the local officers on their concurrent testimony as to the untrustworthy character of the majority of the sarbaráhkárs and the apprehension with which the raiyats viewed the transfer to them of the duties hitherto performed by the kánungo and *dakhil kharij* office at head-quarters. The Lieutenant-Governor took the opportunity, in the course of his tour in Orissa in February 1892, to examine the question on the spot, and satisfied himself that the Director's scheme of utilising the village officials was sound. He noticed certain defects in the machinery for maintaining the record, which he considered could be remedied without difficulty by the adoption of a system analogous to the 'jamabandi' system of Bombay and Madras, which he has accordingly ordered to be introduced. Under this system, the original settlement records at head-quarters remain unaltered, but each sarbaráhkár is required to file annually a revised *khassra* containing a record of all changes, whether due to transfers by sales, &c., or to inheritance, and to mark new cultivation in red ink on his own copy of the map, so that a complete record of mutations may be available at the next settlement. The sarbaráhkárs will be under supervising officers, who should visit every village and see that changes are properly recorded in the map and *khassra*. The subdivisional officer, accompanied by his Sadar kánungo, should test a large proportion of the revised *khassras*, and the tahsildar ought to check them all. Nothing, however, should be done to interfere with the existing practice of registering transfers at the instance of the parties concerned at the Sadar.

Maintenance of Khurda settlement records.

104. The chief new work under this head undertaken during the year 1891-92 was the resumption of the project of carrying out under the Bengal Tenancy Act a survey and settlement of Bihâr. This project had long been before the Government. It had been approved by the Government of India and the Secretary of State, and it was only not commenced in 1889 because of the temporary scarcity from which the Division was then suffering. This obstacle being removed, the project was revived by Sir Charles Elliott in July 1891, in a letter in which, while advocating the measure as in the highest degree beneficial to all parties interested in the land, he warned the Government of India that it would be unpopular with those who had to pay for it, and would excite a strong spirit of opposition. He trusted, however, that as the advantages of the record of rights became known, this opposition would gradually disappear. With a view to confine the operations to manageable dimensions, it was proposed to deal at first with only the four districts of the Patna Division on the north of the Ganges, which contain an area of 12,500 square miles and would afford work for five years for two survey parties. The cost was calculated at 8 annas an acre, of which the Government of India were expected to pay the charges of the traverse survey. The total estimate was, therefore, about 40 lacs, of which about 5 lacs would fall on Government and the remainder be divided equally between the zamindars and the raiyats. It was proposed that the traverse survey should commence in the winter of 1891-92, and the cadastral work in October 1892. The Government of India accepted the charge of one-eighth of the total expenditure as representing the cost of traverse surveys, and gave their general assent to the arrangements proposed by the Lieutenant-Governor, who took an early opportunity to publish a Resolution in which he stated the objects and intentions of Government in carrying out this undertaking. The objects of the cadastral survey and settlement were declared to be to provide all persons interested in the land with an accurate record of the area and situation of all villages and estates, of each tenure and of each raiyat's holding within an estate, and of the status of every one who has rights in the land, and of the rent paid by each raiyat and tenure-holder. The advantages which would accrue to both zamindars and raiyats from the proceedings, and the charges to which they would be liable for the costs of the proceedings, were at the same time explained. Shortly afterwards in another Resolution the result of the survey and settlement of three large wards' estates were made known to the public, and it was shown how little litigation, comparatively speaking, had been caused, and how fully the expense had been recouped to the proprietors by the additions to their rent-roll which had been obtained by them on the discovery of the increased areas held by the raiyats. In November 1891 Mr. J. L. Pemberton of the Survey Department was sent to Muzaffarpur to resume the traverse survey, where the experimental operations of 1886 had terminated: by the end of March 1892 he and his party had completed the traverse survey of 743 square miles. As was anticipated, considerable opposition to the measure was experienced. Meetings were held and resolutions passed at several of the large towns in Bihâr objecting to the survey; and memorials were addressed to the Lieutenant-Governor and the Government of India. In answering these memorials, and also in his replies to addresses presented to him on his visits to certain places, the Lieutenant-Governor endeavoured to allay the agitation by explaining the advantages

which would accrue to all parties concerned, and the efforts which Government was making to keep expenditure low, and to prevent frauds and oppression by the underlings. It was partly with this object that in March 1892 a meeting was held at Muzaffarpur, under the presidency of the Commissioner of the Division, at which the Maharaja of Darbhanga and a number of the principal indigo-planters, zamindars, and leading gentlemen of Tirhut were present, to consider Colonel Sandeman's plan of carrying out the survey operations by the agency of patwáris specially trained for the purpose. In accordance with the decision then arrived at, measures were taken to afford instruction to a selected number of patwáris during the recess of 1892. Soon after the traverse survey had been commenced, the consent of the Secretary of State to the plan of operation, which had been laid before him, was received, and was generally made known to the persons interested in the replies given to memorials against the cadastral survey of North Bihár submitted to Government.

105. The Sujamutha estate is a khas property in Midnapore appertaining to the Burdwan Raj. Owing to disputes between the Raj and the raiyats, a survey and settlement was undertaken in accordance with the provisions of the Tenancy Act. The survey was duly completed and a Settlement Officer appointed in January 1890, upon whom it devolved to arrive at a definite conclusion on intricate questions of fact. For while the Raj, represented by the Manager, was pressing for enhancement of rent on account of an assumed increase in the area of holdings, the raiyats had responded by demanding a deduction in the old rates, alleging that the land had deteriorated owing to water lodging upon it in consequence of deficient drainage. Soon after the Settlement Officer entered upon his duties, and before he had acquainted himself with the circumstances of the case, he proceeded to decide these issues in his judicial capacity, and in giving judgment upon a test suit, he found three important points in favour of the raiyats. His next step was to carry out the settlement in accordance with his decisions until the latter were upset by the Special Judge on appeal some months after. This was the state of things which the Lieutenant-Governor found to exist at the time of his visit to Midnapore. His Honour, after examining the records, observed that a junior Settlement Officer should have received more guidance from experienced superiors than had been the case, and expressed his opinion that it was the duty of a Settlement Officer in all such cases by the most thorough examination and sifting of evidence to acquaint himself with actual facts and existing economic conditions before undertaking to decide the important issues on which a settlement was based. He should take the initiative in undertaking and conducting the necessary enquiries without waiting to be set in motion by petitions and applications and the like. But the result in this particular case was due not only to the too hasty action of the Settlement Officer, but also to the want of co-operation on the part of the local Sub-Manager of the Raj, at which His Honour expressed his surprise. To escape the necessity of beginning settlement operations *de novo*, which would otherwise have been entailed by the Judge's order on appeal, and also because an unreasonable enhancement of the raiyats' rents was apprehended, the Lieutenant-Governor directed that an amicable arrangement should be effected and recorded in the settlement papers. Terms of compromise were subsequently drawn up by the Director of Land Records

and Agriculture and accepted by the Manager, and, on being reported to Government by the Board, received the Lieutenant-Governor's approval.

106. In December 1890 the Lieutenant-Governor accorded his sanction to the continuation and completion of the

Settlement of certain estates in the Sonthal Parganas.

settlement of rent in certain private estates in the Sonthal Parganas. The survey operations were completed in the field season of 1890-91, and when His Honour visited Dumka in April 1891, he found, after personal inspection, that this part of the work had been well and thoroughly done by the Settlement Officer, Mr. Craven; but with regard to the difficult task which remained—the assessment of future rents—it was observed that full use had not been made of the opportunity of collecting information as to existing rents and other matters which ought to govern the decision of fair rents. After the Lieutenant-Governor had discussed the questions at issue with the Commissioner, Deputy Commissioner, and Settlement Officer, settlement rules were drawn up and prescribed, containing instructions for carrying out the assessment. The main principle of these rules was that the settlement should be based on the application of the old settlement rates to the new cultivated area, but it was at the same time provided that no village should be enhanced more than 50 per cent., and that the reduction thus given to the village should be distributed rateably over the holdings, no cultivator being allowed a decrease in his rent, and that, where the rent of a cultivator was increased over 100 per cent., the excess above double the present rent should not be taken till five years had elapsed. There were other limitations and provisions for exceptional cases, but these were the main provisions.

As regards the result of the settlement to the zamindars, it was shown at the time that an increase of 30 per cent. over existing rents would enable them to recover in three years that part of the cost which had fallen upon them. It is estimated that the actual increase will be about 35 per cent.

107. Some important correspondence took place during this closing year of the Provincial contract of 1887-88 to

Expenditure on settlements during 1887-88 to 1891-92.

1891-92, with respect to the expenditure incurred on surveys and settlements in Bengal during the quinquennial period. The Government of India in 1887 had assigned to the Local Government Rs. 2,90,000 a year as the sum intended to cover the survey and settlement charges in Bengal during the currency of the contract, subject to revision on the condition that a programme of settlement work be prepared, and the allotment altered accordingly. A programme covering the remaining four years of the period, was submitted in 1888, to the amount of Rs. 12,28,000 for work in Angul, Banki, Chittagong, and several scattered Government estates. This was generally approved by the Government of India, subject to consideration of the detailed proposals to be submitted in each case before any operations were actually undertaken in Government estates or temporarily settled tracts. Subsequently, when the Government of India and the Secretary of State called for a five years' programme of work for the Survey Department, the Bengal Government furnished a revised programme for the years 1889-90 to 1894-95. This programme also had the general approval of the Government of India, who either acknowledged or sanctioned these proposals with their revised estimates in each case. The cost of the Western Duars settlement turned

out more expensive than had been anticipated, owing to the badness of the climate. Moreover, it was decided to commence the survey and settlement of the whole Orissa Province, and afterwards the commencement of the Bihár cadastral survey was sanctioned in the last year of the contract. Accordingly in July 1891 the Bengal Government made out an account of the expenditure during the five years in question on surveys and settlements, adding together the actuals for three years, the revised estimates for 1890-91, and the budget estimates for the last year; and asked the Government of India for a grant of Rs. 4,14,000 as the sum representing the total excess over the total assignment of five times Rs. 2,90,000 a year, or Rs. 14,50,000. The Government of India declined to admit that the Bengal Government was entitled to claim any further allotment than that included in the Provincial contract, and said that there was no intention to allow financial programmes to be submitted at any time or from time to time, and that the administrative sanction accorded to the survey and settlement of Orissa and other operations did not carry with it financial authority for the increase of the allotment under that contract. In view, however, of the large expenditure involved by the inclusion of Orissa in the programme during 1891-92, and the misapprehension under which the Bengal Government had laboured, the Government of India consented to bear one-half of any excess expenditure actually incurred during 1891-92 over the allotment of Rs. 2,90,000. The Bengal Government then put on official record a full statement of the claim of the Province to a recoupment of the whole of the excess expenditure. The actuals for four years and the revised estimates for one year amounted to Rs. 12,69,376 for survey work and Rs. 7,49,510 for settlement work,—total Rs. 20,18,886. Sir Charles Elliott represented that the assertion that there was no intention of allowing financial programmes to be submitted from time to time was inconsistent with the facts that they were so submitted, discussed and approved, or with the intention and understanding on which the correspondence was obviously based. Admitting that the assertion that administrative sanction did not carry with it financial authority was technically true, the Lieutenant-Governor did not expect that advantage would be taken of such a technicality to the detriment of a Provincial Government which loyally endeavoured to carry on settlement work in the way which in the long run would prove most economical. Sir Charles Elliott therefore formally applied to be reimbursed Rs. 5,50,000, *i.e.*, the difference between the total actual expenditure of 20 lakhs and the total contract allotment of Rs. 14½ lakhs.

108. A programme of the expenditure to be incurred on surveys and settlements in Bengal during the five years

Survey-settlement programme for 1892-93 to 1896-97.

1892-93 to 1896-97 inclusive was prepared in January 1892 and laid before the Government of

India. The total area to be professionally surveyed, excluding Calcutta, amounts to 2,350 square miles in Orissa, to 650 square miles in Chittagong, and to 16,500 square miles in Bihár,—in all 19,500 square miles, estimated to give employment to five parties during each of the years 1892-93 and 1893-94, and to four during the remaining three years. The survey work in Orissa is expected to end in September 1894, and in Chittagong in 1892-93; while by the end of 1895-96 the Bihár parties should have finished North Bihár, and should be free for employment elsewhere. The survey of the Western Duars having been completed by the end of the cold weather of

1891-92, there was only work remaining for the recess of that survey year. The total cost on account of surveys during the five years is estimated at Rs. 33,22,000, the rate for cadastral surveys being taken at Rs. 140' per square mile for Orissa, Rs. 130 for Chittagong, and Rs. 120 for Bihár, and the rate for traverse survey for those parts of the country respectively being calculated at Rs. 40, Rs. 60, and Rs. 40. In previous survey-settlement operations it has seldom been found possible to keep the cost down to these rates, but the appointment of a Director of Surveys for Bengal (Colonel Sandeman) sanctioned during the year by the Government of India will, it is expected, help to diminish the rate of charge. The total cost on account of settlement and record of rights in Orissa, Chittagong, Bihár, Western Duars, and petty operations under district officers during this quinquennial period is estimated at Rs. 34,66,000, of which Rs. 20,00,000 will be incurred in Bihár only. The settlement operations in Orissa are calculated to end in 1895-96, in Chittagong in 1894-95, in the Western Duars in 1893-94, while the preparation of a record of rights in North Bihár will extend beyond the five years, and according to the programme should be completed in 1897-98. The estimate for the entire survey and settlement charges to be incurred during the five years 1892-97 amounts therefore to Rs. 67,88,000. The Government of India have consented to the whole of this expenditure being excluded from the Provincial contract and debited to Imperial revenues. This will take the place of the arrangement previously in force under which the only Imperial item was the cost of traverse surveys.

As the Government of India were unable to sanction the whole amount estimated for survey-settlement charges in 1892-93, the foregoing programme has been slightly modified, so as to bring the expenditure for that year within the required limits. The survey estimates for the current year have been maintained at Rs. 6,64,000, but the settlement estimates have been decreased from Rs. 5,26,000 to Rs. 4,85,000 by reducing the provision for North Bihár from Rs. 80,000 to Rs. 15,000, which it is considered will be sufficient to meet the actual expenses of the next working season, and by deducting a small sum from the estimates for Orissa.

109. In view of the extensive operations which the survey and records

Appointment of Director of Bengal Surveys.

of right in Bihár and the settlement in Orissa and elsewhere in Bengal will entail during the next few years, the Lieutenant-Governor considered that in

the interests of economy and administrative efficiency the entire operations should be placed under the supervision of an officer experienced in cadastral survey, whose time would be wholly at the command of the Bengal Government. A request was accordingly preferred to the Government of India that Colonel Sandeman might be appointed Director of Bengal Surveys and placed at the Lieutenant-Governor's disposal to superintend the conduct of all professional surveys in this Province. To this arrangement the Government of India, with the concurrence of the Secretary of State, accorded their sanction for a term of five years from 1st April 1892, and Colonel Sandeman has accordingly entered upon his duties.

WARDS' ESTATES.

110. The Government of India, in December 1888, suggested the expediency of amending the Bengal Court of Wards' Act; IX (B.C.) of 1879, on the lines of legal provisions in force in the North-Western Provinces and Punjab, so

Amendment of the Court of Wards' Act.

as to enable the Court of Wards, where desirable, to take charge of encumbered estates on the application of the proprietors, and to provide against any valid charges being created against property vested in the Court of Wards by a disqualified proprietor who might run into fresh debt during the period of disqualification. A Bill to effect these objects was introduced in the Bengal Legislative Council in March 1891, and referred to a select Committee, but at this stage it came to light that a provision such as that just mentioned would trench on the Civil Procedure Code, and would thus require to be dealt with by the Supreme Council. The Bill was further developed during the summer and introduced in the Supreme Legislative Council, when it re-assembled in the winter of 1891; and it passed into law as Act IV of 1892.

When the Bill was under consideration, the Hon'ble the Judges of the High Court pointed out that it involved a further extension of the certificate procedure, which, they held, ought not, as a summary process, to be put in force in respect of any demand which is doubtful or the subject of a *bond-fide* dispute. It being generally the case that when a private estate is first taken charge of, its accounts and rent-rolls are extremely inaccurate and untrustworthy, the Government agreed in the High Court's views, though it did not consider it necessary to delay the passing of the Bill into law; but executive orders have been issued enjoining that when an estate first comes before the Court of Wards, the first duty of the Court should be to have a settlement made and a complete record of rights prepared under Chapter X of the Bengal Tenancy Act, and that until, by this means, every dispute between landlord and raiyat has been decided, the manager of the estate must not use the certificate procedure, but must continue to collect only undisputed rents or have recourse to the ordinary law.

111. In his review of the Board of Revenue's Report on the Management of Wards' Estates, the Lieutenant-Governor remarked with regret how little appeared to be done for the permanent improvement of the estates, and enjoined on the managers the duty of devising works of general utility and of devoting part of the surplus profits to their construction. This was enforced by the Government of India, who issued a Resolution impressing on Local Governments the advisability of judiciously employing the accumulated funds of wards' estates in the execution of improvements calculated to promote the ward's interests. They pointed out that the position of a young heir who, on attaining his majority, comes into possession of an extensive property with a substantial surplus revenue is full of difficulty, and the dangers and temptations surrounding it are aggravated if his estate has been so managed that he is placed at once in absolute control of a large balance in cash and securities. The heir under these circumstances might fall into a course of extravagance and indulgence, which would certainly be injurious and might eventually prove ruinous to his prospects. They laid down that the character of admissible improvements was limited by the canon that they must be for the direct advantage of the estate, but at the same time intimated that this canon was wide enough to admit of the inclusion, among others, of improvements such as irrigation works augmenting the rental, as defined in the Land Improvement Loans Act, and on large estates of branch railways and other minor works of communication. In accordance with the spirit of this Resolution the

Lieutenant-Governor issued general instructions for the guidance of the Court of Wards in Bengal, under which the Court is directed to consider, before locking up the surplus funds of a ward's estate in Government paper or other securities, how far it is possible to utilise these funds on improvements of direct benefit to the ward's estate. The Court of Wards, it was laid down, is empowered under the law as it stands to initiate such improvements of any kind, including all the undertakings described in the definition of the term given in the Land Improvement Loans Act, except the special class under clause (f), which Government of its own authority declares to be fitting objects for the loan of public money. Excluding this latter class the term is wide enough to be applicable to all such works as wells, tanks, and irrigation channels augmenting the rental, to the provision of means of communication in accordance with the size of the estate, and in exceptional cases to the founding of hospitals and schools. But the issue, whether an improvement would directly benefit an estate by increasing the rental or otherwise, is one which must be determined on the merits of each case as it arises. It was further pointed out that the investment of wards' funds in railways or similar undertakings for the general improvement of the district or province would not generally be justifiable, but with some such security as a provincial guarantee might be legal; and finally, advances to cultivators upon wards' estates, in the shape of either seed, cattle, or money to be expended on some permanent improvement, when given in the security of large leases and conditional on the payment of enhanced rent, were recommended as a desirable and safe form of investment.

112. Surveys and records of rights were completed during the year in the

Churaman, Maldwar, Shankarpur, and Srinagar

Results of surveys and records of rights in certain wards' estates.

estates, the proceedings in each case having been

instituted while the estates were under the manage-

ment of the Court of Wards. The lands comprised are widely scattered over the districts of Purnea, Dinajpur, Bogra, Malda, Rajshahi, Monghyr, and Bhágalpur. The survey and settlement of the Srinagar ward's estate was undertaken conjointly with that of the Banaili Raja, who is connected with the ward and whose lands are intermingled with his. The objects of the surveys and records of rights were broadly to establish a complete rent-roll where none existed before, to define clearly the rights of the landlords and tenants, to enable the tenants to know their liabilities with precision, and to afford information as to the waste, culturable and unculturable lands of each estate. The proceedings were in most cases marked by either indifference or actual opposition at first on the part of the raiyats, but this feeling disappeared as soon as they began to realise the benefits which would accrue to them from the ascertainment of their true position. It is a noticeable fact that though this was not in any case the main object of the survey being undertaken, the uniform result was a considerable enhancement of rent, varying from 5 per cent. in the case of Maldwar to 19 per cent. in the case of Shankarpur. In the Srinagar-Banaili case the apparent increase is only 23 per cent., but here the old rental was partly fictitious, being a claim for an amount which had never been realised, and which was hotly contested by the raiyats. The new rental gave a very considerable increase over the old effective demand. The most serious difficulties met with were in connection with the method of measurement by chain and the fixing of the standard of measurement. The

following statement shows the area of the estates, the old and new rental, and the cost of the proceedings:—

Estate.	Area.	Old rental.	New rental.	Cost of proceedings.
1	2	3	4	5
	Acrea.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Chursman	182,930	44,778 0 0	49,199 0 0	18,597 0 0
Maldwar	93,683	91,206 0 0	95,714 0 0	60,751 0 0
Shankarpur	167,802	90,673 6 6	1,07,619 12 2	1,31,729 0 0
Srinagar-Banaili	*147,189	*4,68,328 0 0	*4,59,408 0 0	*2,91,328 0 0

* These figures are not final.

The proceedings were not, except in Srinagar-Banaili, where there was very great previous confusion in the landlords' records, marked by more contested litigation than might have been reasonably expected.

CUSTOMS.

113. The net revenue derived from Customs duties amounted to Rs. 2,85,50,883, against Rs. 2,71,48,913 in the previous year, an increase of Rs. 11,02,870, and was 90 per cent. of what it was in 1881-82, the year previous to the abolition of the general import duties. The increase occurred both under imports (Rs. 9,80,960) and exports (Rs. 1,21,910). Under imports there was an increase of Rs. 1,05,509 in the duty on general merchandize, the result of larger realizations from arms and kerosine oil, and an increase of Rs. 8,75,451 in the duty on salt. The increase in export duty was due to the continued increase in the shipment of rice to foreign ports.

114. During the year the Customs establishment at Chittagong, including inspectors, preventive officers, and clerks, underwent revision. The question of improving the pay and prospects of these men had more than once engaged the attention of Government in the past. In 1885 an officer of experience was deputed to Chittagong to report on the subject, and he arrived at the conclusion that the men did very good work on very low pay. His recommendations for increase of pay were not, however, sanctioned in view of financial exigencies. The matter thus remained in abeyance till 1891, when it attracted the attention of the Lieutenant-Governor on his visit to Chittagong, and at his request the late Sir H. Harrison, Member of the Board of Revenue, took the opportunity during his inspection visit to that port to make a local enquiry. He found that the men, chiefly in the preventive establishment, were much under-paid, a state of things which he deprecated looking to the large amount of revenue collected at Chittagong. After a careful consideration of the whole question the Lieutenant-Governor sanctioned the Board's proposals for increase of pay as regards the inspectors and preventive officers, but not as regards the office clerks, in whose case only the chief officials got a substantial increase. The result has been an increase of Rs. 2,094 per annum in the cost of establishment.

OPIUM.

115. The rules for the recruitment of the Opium Department, which prescribed that every fourth vacancy in the Opium Department should be reserved exclusively for natives of India of unmixed descent, were modified by an order issued in September 1891, when the Lieutenant-Governor decided that these recruits should be selected by the results of a competitive examination, instead of, as hitherto, without examination. It was announced that a competitive examination of native candidates for the Opium Department would be held in 1892 at the same time and in the same subjects as the examination prescribed for candidates for the posts of Deputy and Sub-Deputy Collector. It was required as a qualification of a candidate for permission to appear at the examination that he should furnish a certificate of having passed the B.A. examination or satisfactory evidence of having received a good education up to the standard at least of the B.A. examination, as well as the usual certificate of health, good conduct and physical efficiency. On the results of the competitive examination held in March 1892, the candidate who obtained the highest aggregate of marks, Babu Mohima Nath Bhattacharyya, B.A., was appointed to the Opium Department as an Officiating Assistant Sub-Deputy Opium Agent, Benares Agency, after the close of the year.

SALT.

116. Compared with the statistics for the previous year, the figures for 1891-92 show an increase of Rs. 5,72,970, or 2·4 per cent., under the head of receipts, and a decrease of Rs. 6,538, or 1·6 per cent., in the charges. The net revenue therefore rose by Rs. 5,79,508, or 2·5 per cent., and stands higher than in any year since 1881-82. The receipts from imported salt increased by over 8½ lakhs, while the excise duty levied in Orissa fell from Rs. 3,21,044 to Rs. 44,372. This remarkable falling off was attributed to the importation of large quantities of duty-paid salt from Calcutta and Ganjam, and to the exorbitant prices charged by the licensees of the local factories for the small quantity of salt which they produced. The actual imports for the year show a net decrease of 7,10,280 maunds, or 7·3 per cent., but as the stocks in bond were largely drawn upon during the year, no decline in the demand for imported salt is indicated. Owing, it is said, to the rapidity with which steamers can discharge salt with the Kilby scales, the Bombay trade has now more than regained the position it held in 1888-89. The total amount of salt which passed into consumption in Bengal during the year is estimated to be 93,54,219 maunds, a quantity which represents an average consumption of 10·302lbs. per head of the population recorded in the census of 1891. This rate is, however, subject to considerable local variations: in Calcutta it stood as high as 16·06lbs., in the saliferous tracts, excluding Orissa, it stood at 10·75lbs., while in Orissa and in the non-saliferous tracts of the rest of Bengal the average rate was 10·12lbs.

117. Hamburg, Bremen, and Aden salt appear to be gradually displacing Liverpool salt, while in spite of the reduction in the price of this salt during the year, the tendency of the Rajputana and Punjab salts to drive out imported salts seems to continue. The total number of seizures of contraband

salt rose from 1,098 to 1,445 during the year. The question of controlling the illicit manufacture of salt in saliferous tracts is one of considerable difficulty, and is now engaging the attention of Government. Another question which will probably engage the attention of Government is the Madras system of salt administration, which has for some years past been introduced into Orissa. Certain facts seem *prima facie* to suggest that the Madras system has failed in that province; very little local salt has been made, and that salt is bad and dear; the consumption of licit salt has not been increased, and less has been done to stop the making of illicit salt than in the single adjoining district of Midnapore. And in addition to these failures the Madras system has cost over ten times as much as that which preceded it.

The siding connecting the Sulkea Salt Golahs with the East Indian Railway was opened in January 1891. It is said to have increased the demand for bonded salt and encouraged bonding by reducing the cost of its removal and by generally facilitating trade.

EXCISE.

118. The principal improvement effected in the Excise Department during the year was the complete revision of the Revision of the subordinate establishment. subordinate establishment, including the officers known as Inspectors, Sub-Inspectors, Daroghas and Muharrirs. The entire body has been divided into three separate branches, viz., the executive branch engaged mainly in preventive and detective business, the distillery branch occupied in the management of distilleries, and the office branch employed in purely clerical duties. The system of progressive pay with periodical increments has been abolished, and officers in each branch of the establishment have been distributed into grades with fixed pay, so that capable and industrious men may obtain promotion according to their merits.

119. Another improvement of some importance was the appointment of Appointment of Excise Inspectors. two Special Deputy Collectors as Inspectors of Distilleries. Their functions are not, however, confined to the examination of distilleries, but are extended to every form of inspection that is required in connexion with the administration of the Excise Department. In relation to the Excise Commissioner, they occupy much the same position as is held by the First and Second Inspectors of Registration under the Inspector-General. They are styled First and Second Inspectors of Excise, and are stationed one at Patna and the other at Dacca as may be found convenient from time to time, their jurisdiction for inspection purposes being arranged accordingly.

120. The Lieutenant-Governor has for some time past been impressed with the desirability of introducing a greater degree of uniformity into the scale of duty on country spirit throughout the Province, and of equalizing the duty on country rum with the varying rates of duty on country spirit. Excise on rum and country spirits. After consulting the Board of Revenue and the Excise Commissioner, the duty on country spirit has been lowered in the Patna Division and raised in certain other parts of the Province from 1st April 1892. Similarly, the duty on rum has been raised in Central and Eastern Bengal.

121. The attention of Government has also been drawn to certain defects which exist in the working of the Excise Department as regards country spirit. The subjects are—

Defects in the excise system.

- (1) The restriction of still and vat capacity in outstills.
- (2) The system of fixing the duty on liquor according to its exact strength as measured by the hydrometer, compared with the system of issuing it at fixed strengths.
- (3) The system of fixing minimum prices of retail sale.
- (4) The rates of distillery fees.
- (5) The desirability of distilling weak liquor at the Government distilleries.
- (6) The failure of the attempt made in Bihâr, under the orders of the Board, to raise the license fees of outstills.

As to the first point, the Lieutenant-Governor has noticed that the restriction of the still and vat capacity, excellent though it was in principle, had been carried out in an unintelligent way, and had practically no effect whatever, as the limit was placed far above the real wants of the shop. With regard to the second point, exception is taken in certain quarters to the practice of issuing liquor from distilleries at fixed strengths made up by blending the day's distillations. There is no doubt that the system of fixed strength is more suited to low distillations than to high, where a degree or two may make a considerable difference in the rate; and if the system is enforced without discretion it must break down. But the principle is often misunderstood, and it seems to have been thought that the intention was to compel the distiller to distil at a certain strength, not merely to pay duty on a certain strength. The object of the system is to avoid that minute interference which always tends to oppression and corruption. Regarding the third point, it is argued that the price of distillery liquor must always be higher than that of outstills to cover the heavier cost of production; but there is no reason why it should cost more to distil in a Government building than anywhere else; and even if it were so, the price should not be raised artificially by the imposition of an increased minimum price. Coming to the fourth point, it has been demonstrated that there is little relation between the quantity of liquor distilled and the distillery fee. Over the whole Province the distillery fees amounted to Rs. 55,008 on spirits paying a duty of Rs. 15,50,123, or nearly 3·6 per cent.; in the Patna Division they amounted to Rs. 24,156 on a still-head duty of Rs. 1,66,539, or nearly 15 per cent.; thus raising the duty per gross gallon from 7 to 8 annas. It is clear that the fee should be modified so as to bear some relation not only to the quantity but also to the strength of the liquor distilled. The fifth point is more important than any other reform which is required in the department. The Lieutenant-Governor is a hearty supporter of the central distillery system, the essence of which is that every gallon of liquor distilled should pay duty to the State, as opposed to the outstill system under which the more the liquor distilled, the less the duty paid. But he strongly condemns the idea that the introduction of the Government distillery system should be followed by the introduction of stronger liquor than the people have been in the habit of drinking. Worked in this way, a system which is advocated on principles of temperance as well as of sound finance becomes an instrument making for the spread of drunkenness. Sir Charles

Elliott insists on the distilling (as a general rule) of no stronger liquor than is made at the outstills and generally consumed by the people, subject to the condition that it must be strong enough to carry to the shops where it is to be sold. An illustration of the sixth point was afforded by the facts ascertained on an inspection of the outstills at Motihari. Here much time had been wasted in elaborate attempts to raise the monthly fee paid by the abkar to a rate of Rs. 2.8 per gallon London-proof on the theoretical produce of the raw materials used. But inquiry showed that the theory had not been and could not be worked up to, that the assumed duty was never realised, and that the whole process merely resulted in reducing the number of outstills and concentrating them in fewer hands.

122. During the year orders were issued to prohibit the consumption of opium or its preparations on the premises of licensed shops. As it was apprehended that the adoption

Suppression of opium dens.

of this measure might lead to illicit dealings, thus increasing the difficulty of enforcing Police regulations in large towns, this risk has been minimized by directing the reduction of the limit to one tola of the preparations of opium, madak and chandu, which private persons are allowed to possess. Since the close of the year the Government of India has sanctioned a proposal of this Government to prohibit absolutely the manufacture or sale of intoxicating drugs except under license, a measure calculated to prove most effectual in discouraging private dens without sacrificing the revenue now derived from fees paid by licensed vendors.

123. The financial results of the year show that a decline of revenue amounting to Rs. 12,499 in 1890-91 has been

Statistics of the year.

followed by an increase of Rs. 6,68,878 in 1891-92, while the charges have risen by Rs. 20,408 as against an increase of Rs. 1,15,730 in the previous year. The revenue rose under all heads except imported liquors, chandu and gánja. The average incidence of the excise revenue is two annas six pies per head. Under country spirits the revenue from outstills rose from Rs. 20,92,642 to Rs. 24,50,145, but this was to some extent counterbalanced by a fall in the distillery revenue from Rs. 24,35,620 to Rs. 23,64,498. The revenue from country rum rose from Rs. 98,383 to Rs. 2,29,972, while that from the licenses to sell imported liquor fell from Rs. 2,31,095 to Rs. 2,23,644. Tari yielded a revenue of Rs. 9,57,405, against Rs. 8,45,586 in 1890-91. The gánja revenue fell from Rs. 23,11,713 to Rs. 22,92,568, while the receipts from excise opium rose from Rs. 19,95,312 to Rs. 21,18,825.

The number of arrests for offences against the excise laws fell from 5,054 to 4,800, and the convictions from 4,233 to 4,040. Fines were imposed to the amount of Rs. 87,077, and Rs. 72,004 were paid as rewards.

STAMPS.

124. The gross revenue from stamps amounted to Rs. 1,51,00,462, against Ra. 1,43,06,594 in the previous year, and the net

Statistics of the year.

revenue rose from Rs. 1,36,86,862 to Rs. 1,45,17,896.

The net receipts were larger than those of any preceding year by over 8 lakhs. The increase of revenue was specially under judicial stamps,—the result of the growth of litigation,—the collections having amounted to Rs. 1,09,50,620, against Rs. 1,01,88,707 in 1890-91, while the realizations under the Indian Stamp Act aggregated Rs. 41,49,842 against Rs. 41,17,837. There is room for improvement in this branch of the revenue, especially under one-anna receipt

stamps, and it is believed that if assessors of income-tax, who are vested with powers to impound instruments not duly stamped, are vigilant in the exercise of this portion of their duties, much could be done to increase the revenue. The prosecutions instituted for infringement of the provisions of the Indian Stamp Act numbered 598; fines were imposed to the amount of Rs. 4,995, and Rs. 977 were disbursed as rewards.

125. A decision of some importance was given by the High Court on the question referred to them by the Board of Revenue as to the amount of stamp duty payable on the entrance certificates issued by the Uncovenanted Service Family Pension Fund, Calcutta. This question had formed the subject of a protracted correspondence between the Managers of the Fund, the Board, and the Local and Supreme Governments, when it was finally ruled by the High Court that the instruments in question should bear a stamp duty of six annas.

126. A reference was made by the Bengal Chamber of Commerce, in which the questions were raised (a) whether Promissory Notes other than those chargeable with a duty of 6, 10, and 12 annas could be written on impressed sheets intended for hundis, and (b) whether inland bills-of-exchange could be written on impressed handi sheets. The Government of Bengal expressed an opinion that the existing rules should be modified to afford the convenience sought, and the Government of India has accordingly prescribed a rule which provides that promissory notes and bills-of-exchange shall, except as provided by section 10 of the Indian Stamp Act and rules, be written on plain impressed sheets or on impressed sheets bearing the word "handi."

INCOME-TAX.

127. A ruling was promulgated by the Government of India that a marriage dower or present was not assessable to income-tax. Another ruling has been given by the same authority in connexion with a memorial from the Maharaja of Ilutwa, in which he complained of double assessment to income-tax and cesses of certain sairats or miscellaneous sources of zamindari income. It has been decided that these sources of income are liable to pay both income-tax and cesses, with the exception of "motarfa" or the rent of lands on which tenants build their dwelling-houses, with the attached out-offices. On these the zamindar is entitled to claim remission of income-tax in so far as the rents of the lands are levied from cultivating tenants.

128. The final demand of income-tax for 1891-92, including penalties, fines, and arrears of previous years, amounted to Rs. 45,30,877, against Rs. 45,30,457 for the previous year. The actual receipts amounted to Rs. 43,06,720 against Rs. 42,38,075, the charges to Rs. 1,86,959 against Rs. 1,83,712, and the net revenue to Rs. 41,19,761 against Rs. 40,54,363. The number of objections filed was 12,388, of which 4,513 proved successful,—a percentage of 36·4, against 38·3 in 1890-91. A larger number of distress warrants was issued, but the number of instances in which sales were resorted to fell from 346 to 333. The average incidence of the tax for the whole Province was Re. 1 to every 19·2 persons, and in Calcutta Re. 1 to every 4 person. Nearly one-half (or 48·3 per cent.) of the total collections was contributed by Calcutta.

MEDICAL.

129. Improvements were sanctioned during the year in the salary and status of the Assistant Surgeon class. It was decided

Assistant Surgeons.

by the Government of India that all supernumerary Assistant Surgeons would draw Rs. 50 a month while holding no temporary or permanent charge and while merely attached to hospitals or on similar duty, but all supernumerary Assistant Surgeons were to receive Rs. 100 when holding temporary or officiating charges. At the same time the proposals of the Bengal Government that Assistant Surgeons should be separately recruited from among the passed students of the Calcutta Medical College were sanctioned on the understanding that men so recruited would be liable to serve in Assam and temporarily in other Provinces in cases of emergency.

130. A scheme for the formation of a special grade of medical subordinates, to be called Sub-Assistant Surgeons, was laid

Sub-Assistant Surgeons or Civil Hospital Assistants.

before the Government of India with the object of making better provision for medico-legal work at subdivisions. This was rejected on the ground that the measure advocated would lead to a demand for a similar measure in other Provinces, and would disorganise the recruitment for civil and military Hospital Assistants throughout India. An alternative project for raising the status and professional attainments of Civil Hospital Assistants so as to fit them for the charge of subdivisions has since been introduced.

131. The rules for the management of hospitals and dispensaries by local authorities were recast during the year, the

Dispensary rules.

conditions under which Government aid will be given and the powers of local authorities being carefully defined. These rules are issued under the Municipal and Local Self-Government Acts and have the force of law.

132. The work of registering births and deaths has hitherto been so indifferently performed, that the results have been

Vital statistics.

practically useless for statistical purposes. After a very careful consideration of the whole question, and after detailed inquiries in several municipalities, the Lieutenant-Governor satisfied himself that the duty of collecting and recording vital statistics could not properly be entrusted to municipalities in Bengal, and decided that nothing short of a complete change of system would lead to really satisfactory results. Municipalities have accordingly been relieved of the charges hitherto incurred under this head, and since the 1st of January 1892 the work of registration has been transferred to the town police. The registration of births, which had hitherto been confined to municipalities, has further been extended to all rural areas, and it is hoped that in future more accurate data will be obtained upon which the important calculations required for sanitary purposes may be based with some degree of confidence.

The average birth-rate returned for the year 1891 was 21.46 per thousand, whereas it may reasonably be conjectured that in reality it exceeds 40 per thousand. The death-rate is also returned at 26.94 per thousand, which is much below the actual death-rate.

133. In reviewing the Annual Report of the Sanitary Commissioner for 1888, the Government of India remarked that

Sanitation.

Government should take special sanitary action in

its own villages. A Committee was appointed to enquire into the sanitary improvement of Government estates, and the result of their deliberations was communicated to the Government of India. The principal difficulty with which the Government is confronted in any systematic attempt for the sanitation of Government villages is the question of finance. No great results can be expected at once, and Government will be content in the first instance with a well-considered scheme for introducing and, what is more difficult, maintaining a proper supply of drinking water. A practical suggestion of the Committee, which is likely to result in more material good work in the direction of rural sanitation than any other action the Government might take, is to set aside for sanitary improvements an allowance of two per cent. on the rental of all Government estates. This suggestion has been sanctioned with the concurrence of the Government of India.

134. The question of the reorganization of the Vaccination Department engaged the attention of Government during the year, and since its close material changes have been introduced. Under the old system, the Superintendent of Vaccination had an inconveniently large area to deal with, which rendered it impossible for him to work in effective concert with the District Magistrate; and much of the opposition with which vaccination was received was attributed to its being cut off from the district administrative, and left to fight its way unaided by the influence which a District Officer may judiciously exercise in matters like this. The chief feature of the changes introduced is the transfer of the executive supervision and control of the work of vaccination to Civil Surgeons, who are for this purpose *ex-officio* Superintendents of Vaccination in their respective districts, and who have been allowed a sufficient establishment, recruited in great measure from the existing staff, to carry on the work. Of the six Superintendents of Vaccination hitherto employed in the Department, the services of three have been retained as supervising officers under the reorganized scheme. The jurisdiction of each of the three Deputy Sanitary Commissioners will comprise three of the nine revenue divisions of the Province; and among other duties these officers will be required to inspect and report on vaccination operations in specified areas of districts to be selected in the beginning of each year in communication with the Civil Surgeons concerned.

135. During the year a second animal vaccine depôt was opened at Darjeeling under the immediate supervision of Dr. Waddell, Superintendent of Vaccination, Darjeeling Circle, and this depôt, is now in full working order. Operations were commenced on the 21st November 1891, and up to 31st March 1892 thirty-one calves had been vaccinated, and 965 tubes of lymph issued. During the year, particular attention was paid to the subject of producing good lymph, and lymph was prepared and stored for experimental purposes in the following forms:—

1. Simple lymph, capillary stored.
2. Simple lymph, capillary stored, sealed at either end with glycerine.
3. Lymph pulp, glycerised.
4. Lymph pulp, lanolized.

Of these, only the fourth method was found to yield really satisfactory results. The preparation of glycerised lymph is held to be unsuitable for

India, and its production has been discontinued in both the Calcutta and the Darjeeling depôts. Lanoline, on the other hand, has proved successful, and is pronounced to be the most efficient mode of preserving and diluting lymph in India. This conclusion is based upon the results of a number of experiments which appear to have been carefully recorded.

136. With the object of securing the successful introduction of lanoline lymph, Dr. Waddell, who had made the subject his special study, was deputed to visit all districts in Bengal and instruct the officers of the Vaccination Department in the use of an instrument, called the scarifier, which is considered by some authorities to be more suitable than the ordinary lancet. In Dr. Gregg's opinion, however, the one instrument is in fact as suitable as the other, and until a more definite decision can be arrived at as to the superiority of either instrument, the Lieutenant-Governor has left it to Civil Surgeons to choose for themselves with which they will perform their operations.

137. The general health of the Province during 1891 was decidedly worse than the average in all districts, except Pabna, Backergunge, Noakhali, Tippera, Patna, Puri, and Lohardaga. The number of recorded deaths was 229,575 from cholera, 16,193 from small-pox, and 1,333,395 from fever, as compared with 145,885 from cholera, 12,619 from small-pox, and 1,153,569 from fever in 1890. Scanty rainfall in the latter part of 1891 and the great movement of population which took place during February of the same year, in consequence of the *Ardhodoya Jog* festival, are considered to have been the chief causes of the widespread epidemic of cholera during the year. The mortality from small-pox was the greatest since the year 1884, the ratio being higher in towns than in rural areas. From fever the mortality was even higher than in 1890, when the death-rate exceeded that of any previous year since registration was introduced.

Municipalities expended Rs. 13,37,569 on sanitary improvements during the year. The District Boards spent Rs. 49,217 in sinking wells, excavating tanks, and improving drainage channels, while the total amount spent on these objects by private individuals was Rs. 1,51,046.

138. In 1891-92 there were 1641,088 vaccinations performed, and the percentage of successful cases showed 99.21 for primary and 39.09 for secondary operations.

INSTRUCTION.

139. The physical training of the boys under instruction was encouraged by the formation of clubs for athletics, by drill and gymnastic exercises, inter-collegiate competitions, and annual sports. On every hand there was a great increase of the zest with which the national English games, especially football, were played. In Calcutta sites on the maidan were allotted for three European and two native colleges, but the distance of the maidan from most of the private schools and the want of playgrounds near the boys' homes proved an insurmountable obstacle. The Lieutenant-Governor has expressed his hope that some generous and public-spirited individuals may come forward and provide means for the physical improvement of their race.

140. In Calcutta the want of boarding houses or of decent lodging houses for the numerous students is the crying evil connected with the present University system. Unless the young men live in the houses of relatives or friends, or in the few boarding houses provided by the authorities, such as the Eden Hostel and the Madrasa Boarding House, they are obliged to make up parties of their own to hire houses and fill them as full as they can for economy's sake. Sir Charles Elliott looks to the Society for the Higher Training of Young Men (in default of the University or the Municipal Corporation) to frame a list of the most decent and suitable lodging houses and indicate them to new arrivals and deter them from occupying those which are objectionable, or from overcrowding those which are otherwise suitable.

141. The Lieutenant-Governor considered that efforts should be made to secure uniformity in the standard of University examinations, which could only be obtained by continuity of the examining body. The figures show that the tendency has been since 1889 for the Entrance Examination to grow harder, the F.A. to grow easier, and the examination for B.A., B.L., and M.A. to grow harder.

142. On the question of the proportion of the primary grant spent on stipends allowed to stipendiary schools to the amount spent on rewards to non-stipendiaries, the Lieutenant-Governor laid down as working principles,—(1) the mixed system of stipends with rewards; (2) the fixation of a minimum and a low maximum of rewards; (3) the inclusion of the stipends in the reward ultimately adjudged. Some District Boards have already accepted these recommendations, and great changes in consequence are expected.

The system of payment by results was approved. The chief principle of this is to secure the establishment of a school of doubtful position, insuring its stability by the promise of a small stipend by way of retaining fee (as an advance payable out of the rewards) supplemented by rewards for passed pupils. The efficiency of the stipendiaries over that of the non-stipendiaries was considered due, *firstly*, to the practice of admitting those schools to the stipendiary list which had shown good results year by year; and, *secondly*, to the better financial position and greater stability of the fortunate few. While anxious to encourage the system of rewards, the Lieutenant-Governor thought that schools of an inefficient and ephemeral character, which failed to earn even Rs. 3 or Rs. 4 on the results of the reward examinations, should not be allowed to derive any benefit from the system.

143. The number of pupils under instruction rose from 1,408,943 to 1,531,965, and the total of institutions, public and private, from 65,950 in 1890-91 to 67,824 in 1891-92.

Under secondary education there was a decrease of 108 schools and 4,927 pupils, but this is only due to the transfer of certain schools from the secondary to the primary class. The numbers of upper primary and lower primary schools were 3,668 and 44,918 respectively. The pupils numbered respectively 135,371 and 987,948. There was an increase in the number of upper primary schools and pupils, while the number of lower primary schools showed a recovery from the downward tendency in the number of pupils. The total gain is 1,045 primary schools and 52,499 pupils. The number of Muhammadan pupils increased from 415,428 to 448,847, and the ratio to the

total number of youths under instruction from 28·2 to 29·2. The number of pupils of the aboriginal races decreased from 29,757 to 29,657. The statistics of European education show a tendency for the number of schools to decrease and of the pupils to increase, the numbers for the year being 67 schools and 7,098 pupils. Female schools increased from 2,270 to 2,743, and their pupils from 49,638 to 57,801.

The total expenditure on education in Bengal, including all disbursements from public and private sources, amounted to Rs. 93,52,000, as compared with Rs. 85,74,000 in the preceding year—an increase of Rs. 7,78,000. Of this 25½ lakhs of rupees were contributed from Provincial Revenues, 10½ lakhs by District Boards, about one lakh by Municipalities, and the balance came from pupils' fees, endowments and subscriptions.

144. The Civil Engineering College, formerly a department of the Presidency College, Calcutta, was transferred in 1880 to

The Civil Engineering College,
Sibpur.

Sibpur, and closely connected with the Workshops established at that place about the same time by

the Public Works Department. Arrangements were made for the instruction of four classes of students, namely—(1) Civil Engineers, (2) Mechanical Engineers, (3) Civil Overseers, (4) Foreman Mechanics. The second and third classes were, however, either never opened or were quickly closed for want of students. The first class was composed of matriculated members of the University, and prepared, after a course of study extending over four years, for the License in Engineering (Civil or Mechanical) granted by the University. The last class was of a lower status, in point both of the initial qualifications demanded of the students and of the standard of instruction to be imparted to them. The students in it were apprenticed to the Executive Engineer in charge of the Workshops, and hence were known as Mechanical Apprentices. Every student in each class was to work for some hours a day in the shops, both during the period of his class instruction and for a certain time after its close.

A Committee of Engineers and Educational officers was appointed to revise the course of study and of practical training, and on their recommendation the following arrangements were introduced:—

The standard for admission to the Engineering Department of the College was raised by requiring a candidate to have passed one or other of the following tests:—

- (1) The Entrance examination of the Calcutta University after obtaining not less than 40 and 50 per cent. respectively of the marks assigned to English and mathematics. With this qualification the candidate must be under 19 years of age.
- (2) The F.A. examination of the Calcutta University; the candidate's age being under 21 years.
- (3) The B.A. examination in the B course; the candidate's age being under 23 years.

In order to attract students of the highest attainments, it was determined to award the ten special scholarships, reserved for students on admission to the College, to the following classes of students in order:—(1) Bachelors of Arts who have taken up the B course; (2) candidates who have passed the First Arts examination; (3) other candidates according to the number of marks gained in English and mathematics jointly.

In order that those students who fail to obtain a degree may still obtain some acknowledgment of the extent to which they have prosecuted their studies,

the Principal of the College has been authorized to hold a final College examination of the students of the Engineer class, and to issue certificates of proficiency in the theoretical course, similar to those which are granted to students of the apprentice class. The holders of the certificates, whether they obtain a degree or not, will afterwards be put through the full course of manual instruction and practical training prescribed for the Engineer class.

Sanction has been given to the payment of the travelling expenses of students engaged in surveying and similar work, as also to the publication of an annual calendar for the College.

The proposal of the Committee to reduce the course of study from four to three years, and to separate the theoretical and practical training, was considered by the Faculty of Engineering and rejected. The Faculty was of opinion that a further attempt should be made to give simultaneous instruction in theory and practice, and deprecated any departure from the established system, which has accordingly for the present been maintained. The proposal that B.As. in the B course should be encouraged to join the College by reducing their time of study was agreed to, and the Senate has recently adopted the recommendation of the Faculty that B.As. in the B course shall be allowed to present themselves at the F.E. examination after a course of two years, instead of three (as before), at an institution affiliated in Engineering. The final College examination of the students of the Engineer Department was deferred until the opinion of the University on the proposed changes was made known, and will be introduced from next year, the students not having had notice of the change in time to allow the examination to be held this year.

Holding strongly to the importance of maintaining the College at the highest possible state of efficiency, the Lieutenant-Governor has issued orders in the Public Works Department that, in future appropriations of funds for expenditure on public works, it may be arranged to send a sufficient quantity of work to the Sibpur shops, so as to keep the latter regularly and fully employed. In order that the students may not merely look on while others, better trained, do the work, but may actually take part in it themselves, the Lieutenant-Governor sanctioned the expenditure of Rs. 12,000 on machine tools for the exclusive use of students, while the teaching staff of the workshop was strengthened by the addition of a European instructor and four native instructors. The students and apprentices are now employed on manufacturing machinery; the vices in the fitters' shop, lathes and drilling machines have been made and fitted up by them. This is a distinct advance in their practical training, and the value of the services of passed apprentices has been thereby enhanced. The shops, however, are not yet as fully equipped in the matter of machines as they should be, and it will be some time before they will be able to manufacture for outlying technical schools, unless better provided in this respect.

The model-room was completed during the year, and is now fairly equipped. A catalogue is being prepared with a short description of each model, and this addition to the College will be a distinct educational gain to the students. A photographic room has been opened, partly with a view to teach the students how to photograph, but chiefly to prepare lecture diagrams by enlargement. A proposal is now under consideration to open two classes in agriculture, so as to fit students to become managers of private or wards' estates, or tahsildars and kánungos under Government. Arrangements have recently been sanctioned by which the Principal is authorised to visit existing Survey

and Technical Schools. It is hoped by this means to eventually bring about a certain uniformity in standards of instruction. *

The advantage of securing to the Province a supply of young men trained to engineering pursuits is, in the opinion of the Lieutenant-Governor, a sufficient justification for the expenditure incurred, which will be strictly reproductive. He has therefore thought fit to encourage students to join the Engineering Department by every means in his power. Formerly one and two appointments in the grade of Assistant Engineers were reserved in alternate years for students of the Sibpur College who qualify at the University examination, and who afterwards show satisfactory progress when posted on probation to public works. The Lieutenant-Governor is prepared to direct that all appointments in the upper subordinate grade of the Public Works Department, made by the Government of Bengal, shall be made from students of the Sibpur Engineering College, who have graduated in Engineering at the Calcutta University and successfully passed the subsequent period of practical training. His Honour has also accepted the recommendation of the Committee that the students of the College who, without having passed the University Examination in Engineering, may pass the final College Examination, and have also gone through the subsequent two years' course of practical instruction, should be declared qualified for employment as District Engineers, provided they have been employed in Engineering works for not less than five years, exclusive of the time spent in their practical course, and hold satisfactory certificates of good conduct and efficiency during such employment.

As regards the apprentice classes, which are, in His Honour's opinion, equally valuable with the Engineering Department, the Lieutenant-Governor anticipates that the extension of railways and public works and the development of private enterprise in various branches of manufacture will afford abundant opportunities of remunerative employment. His Honour therefore looks forward to the time when all District and Municipal Boards will devote a portion of their funds, as some have already done and are doing, to the establishment and maintenance of local technical schools, for which the Sibpur shops will in time be able to supply machines and tools at a small cost. The most promising local pupils should complete their training at the Sibpur College, being provided with scholarships for that purpose. In this way His Honour trusts that the Sibpur College will attain to its true position as the centre of genuine technical education in Bengal, and will be a powerful factor in promoting and developing the industries of the Province.

145. In view of the possibly great development of the mining industry, the

Lieutenant-Governor has approved and sanctioned,

The training of Mining Assistants.

as a tentative measure, a scheme proposed for the training of Mining Engineers in connection with

the Sibpur College. The special course of training will be deferred until after the student has passed the ordinary examination for the degree or license in engineering. By this means, in the event of a student finding that the mining industry offered him no satisfactory prospects, he would still have his engineering degree to fall back upon, and be qualified for employment as a Civil Engineer. One principal feature of the scheme is that two out of the eight graduate scholarships allotted to the Sibpur College will be reserved for such students as may take up the course in mining. It is also proposed that an arrangement be made with the managers of collieries under Government or private superintendence, under which the mining students will be

drafted for eight months to work in a mine, during which period they will also be preparing, by the help of the Superintendent of the Mine and by private study, the special subjects in which they will finally be examined. After the expiration of these eight months, during which they should become practically familiar with mining operations and mining theory, the students will return to the Sibpur College for a course of four months' lectures and practical work in geology, mineralogy, metallurgy, assaying, and such other subjects as are necessary for a Mining Engineer. At the end of 12 months an examination will be held by the College staff, assisted, if necessary, by the Mine Superintendent under whom the students may have been placed. Finally, successful candidates will receive diplomas of qualification as Mining Engineers issued by the Principal of the College and countersigned by the Superintendent of the Mine.

146. With a view to the encouragement of drawing as an element of education, in connection with the advancement of the arts and industries in Bengal, the following

Drawing in schools.

decisions were arrived at :—

- (1) that drawing and allied subjects should be generally introduced in high schools, and eventually in middle schools ;
- (2) that drawing should be made a compulsory part of the course in training schools, sanction being at the same time accorded to the expenditure of a sum not exceeding Rs. 6,000 per annum for teaching drawing in the eight training schools of the first grade ;
- (3) that for the purpose of awarding the Government junior scholarships, the marks gained in drawing by each candidate, who takes up the subject at the Entrance examination of the Calcutta University, should be added to his total ; and
- (4) that a drawing master should be appointed in each high school, the expenditure being met from provincial revenues, if the institution has not a surplus income after the deduction of fees.

147. In accordance with the policy that Government should withdraw from the province of education in all cases in which the

Closure of the Muzaffarpur school.

reasonable requirements of the people can be otherwise provided for, the Lieutenant-Governor directed

during the year that the zilla school at Muzaffarpur, where there are two private unaided Entrance schools and one aided school, should be gradually closed by prohibiting the admission of new students and transferring the teachers to other schools as opportunities offered.

148. In pursuance of the same policy orders have been issued for the transfer of the zilla schools at Monghyr and Barisal (which are now self-supporting) to Joint-

Monghyr and Barisal zilla schools.

Committees formed under the provisions of the

Bengal Local Self-Government Act.

149. One of the difficulties experienced in effecting the transfer of Government schools to private management has been overcome. It arose from the fact that

Transfer of teachers of Government schools.

teachers whose services were made over with a

school so transferred, but who had not completed ten years' service qualifying for pension under Government, were debarred under the Civil Service Regulations from contributing for pension. In order to relieve the hardship which

individual officers thereby suffered, it has been decided that teachers employed in a Government school which may hereafter be transferred to a statutory local body will not be required to contribute for pension, but will, nevertheless, retain their pensionary privileges, while in those cases in which a school is transferred to a local body, not being a statutory local body, the Local Government may arrange in accordance with Article 849A of the Civil Service Regulations so as to enable the Government teachers transferred to retain their pensionary privileges.

150. With a view to the revival and encouragement of Sanskrit learning, the indigenous Sanskrit *śāls* of Bengal have been, under the orders of the Lieutenant-Governor, inspected by Mahamahopādhyāya Mahesa Chandra Nyāyaratna, C.I.E., Principal of the Sanskrit College, Calcutta, and his report was drawn up to show which of the *śāls* most merit support from Government, and how that support should be given.

In the Province of Bihār, Sanskrit studies are reported to be at a low level. Great poverty exists among the pandits of Bihār, which compels them to travel about, visiting wealthy people and receiving gifts from them; hence their work as teachers is interrupted, and an irregularity of system prevails which cannot but prejudice the results. On the other hand, most of the Rajas of Bihār maintain *śāls* in their own towns, paying regular salaries to the pandits, and in some cases also allowing free board to the students, while associations have been established in several places with the object of promoting Sanskrit studies.

In Orissa generally Sanskrit learning is reputed to be at a lower ebb even than in Bihār, but the study of Sanskrit has received some impetus from the institution of the Title examination, the benefits of which are, however, chiefly confined to Puri and Dhenkanal, and by no means extend to the Province as a whole.

In Bengal Proper, which has always been especially celebrated for the study of the Nyāya philosophy, the renowned seats of Sanskrit learning are—Nadia, Bikrampur, Bakla Chandradwip, Tribeni, Bhatpara, and Khanakul-Krishnagar. In Bengal, as a rule, pandits lodge and feed their pupils, the practice of old being for zamindars and other wealthy Hindus to make grants in perpetuity of rent-free land to pandits noted for their learning, but such liberality has gone out of fashion, and grants of this kind have now almost entirely ceased. Regular money contributions or gifts of rice are said to be diminishing in number, and the pandits have therefore been driven to depend chiefly on casual and precarious gifts. To this unfavourable change in the attitude of the patrons of Sanskrit studies must be attributed the gradual diminution in the numbers of the *śāls* and the pupils they receive.

However, the existence of the *śāls* and a number of other institutions, religious and secular, founded for the purpose of promoting the study of Sanskrit will show that the people of India have not entirely lost interest in their ancient language and literature. To maintain and strengthen this interest is a national aim, which in the opinion of Sir Charles Elliott should have the full sympathy of Government, and His Honour, in the hope of stimulating private liberality, has sanctioned, in addition to the allowance of Rs. 2,400 now paid to *śāl* students at Nadia, the grant of Rs. 15,600, or a total of Rs. 18,000 per annum, for the grant of stipends and rewards to teachers and pupils of *śāls*. These will mainly be distributed in accordance with the results of the Title

examination held at the Sanskrit College, Calcutta, and other similar examinations conducted by the recognised Sanskrit Associations.

MISCELLANEOUS.

151. The transactions of the Stationery Department continue to grow, and there was again in 1891-92 an increase in the value of the stores both received and issued. On the other hand, the value of stores received from the India Office, which has been reduced by more than 3½ lakhs within the last five years, showed a decrease of Rs. 65,427 in 1891-92, as compared with the previous year. This is the outcome of the policy, which has been steadily pursued, of substituting, as far as possible, locally manufactured stores for imported articles. The substitution of paper made in India for English paper not only effects economy, but has also been the means of developing an important local industry.

The outturns of the Jail, Secretariat, and Darjeeling Presses amounted in 1891-92 to Rs. 5,12,934, against Rs. 4,92,199 in 1890-91, while the actual expenditure rose from Rs. 1,95,812 to Rs. 2,09,483. In the Jail Press the increased outturn was due in some measure to the Type-Casting Department being in full operation during the year.

152. During the year the transliteration of the Indian names of well-known places, rivers, &c., in Bengal, of vernacular technical terms in constant use, and names of religious festivals, was revised by the Bengal Government with the approval of the Government of India, lists of words being published for general adoption. The spelling of the names of places and rivers which had been fixed by historical and literary usage was not altered, but it was laid down that all other names of places and all technical vernacular terms which it might be found necessary to employ in official letters should be transliterated on the scientific system accepted by Government. The Lieutenant-Governor considered the revision to be necessary, as the tendency of educated people is towards a system of spelling which is regarded as scientific, and as it was, moreover, becoming more and more irksome to spell by the antiquated phonetic methods a number of names which could not be said to have received the stamp of universal acceptance.

153. The question of increasing the number of Volunteers, both Active and Reservists in India, had been under the consideration of Government since January 1891. In view of the great importance attached to the subject by the Government of India, Sir Charles Elliott invited the hearty co-operation of all Administrative, Executive and Departmental authorities under the Bengal Government in promoting the Volunteer movement, and at the same time conferred on the question of the most effective way of increasing the popularity of volunteering in Bengal with several of the officers in command of Volunteer Corps and other gentlemen competent to advise in the matter. As the result of this consultation the Bengal Government recommended that in lieu of the present capitulation allowance, a grant of Rs. 10 a month be sanctioned for each thoroughly efficient Light Horse Volunteer, the standard of efficiency being raised; that the Calcutta Light Horse be allowed to purchase from the Remount Depot

a certain number of horses every year at the average price fixed by Government, on the understanding that this privilege would be confined to Volunteers who pledge themselves, apart from ill-health or unforeseen circumstances, to continue to serve for three years with the Corps; that a permanent advance be made, without interest, to each Light Horse or Mounted Rifle Corps, to serve as a *Chanda* fund for buying remounts; that service postage stamps be allowed free to Volunteer Corps; that good-conduct medals for long service be granted to Volunteers of ten years' approved service possessed of a certificate of efficiency signed by the Commanding Officer of the Corps, with his recommendation for the award in each case, and that additional clasps for each period of five years beyond the first ten years be allowed on similar conditions; that the grant for passing in tactics be increased from Rs. 5 to Rs. 100 a year, so as to attract officers to the examination; that a greater number of rounds of free ammunition be allowed annually to each Volunteer than the present quantity, 100 rounds; and that the conditions laid down for Volunteer Reservists in Army Circular of 1889, No. 51, be modified to the extent of excusing attendance at drill and the wearing of uniforms. It was also suggested that in future all Reservists should be attached to Companies of active Volunteer forces and not enrolled separately, and that no European or Eurasian should be allowed to join the Provincial Service of Government unless he accepts the condition of becoming a Volunteer. Sir Charles Elliott, while attaching great importance to the efficiency of the existing Corps, was most anxious to obtain an increase in the numbers of the active Volunteers and Reservists throughout Bengal, and accordingly, in desiring all civil officers to take every opportunity to persuade all eligible persons to become Volunteers, he emphasised the principles (1) that the first object should be to induce men to join a force of active Volunteers wherever possible; (2) that there are grave objections to allowing a Reserve force to deplete an existing Volunteer force; (3) that it is most desirable to induce all European and Eurasian adults to join a Reserve force rather than remain unenrolled in any force. These proposals, as formulated by the Lieutenant-Governor, came under the consideration of the Committee of Volunteer-officers appointed in February 1892 by the Government of India to examine the whole question of the Volunteer movement, and the assistance to be afforded to it by Government; but at the close of the year the decision of the Supreme Government on the different proposals before it had not been published.

154. At the request of the District Charitable Society and of the Eurasian and Anglo-Indian Association, the Lieutenant-Governor, in April 1891, without pledging Government to accept any new financial responsibilities, appointed a representative Committee to enquire into the destitution prevalent among Europeans and Eurasians in Calcutta and Howrah, and the various means possible for relieving and checking it. The Committee were occupied in this work for upwards of a year, and the report which they have submitted, with its appendices, is a valuable and interesting record of information. It was shown that statistics pointed to the existence of an amount of pauperism among the domiciled European community of Calcutta and Howrah far larger than what is believed to be the amount of similar destitution in England, while the percentage of pauperism, that is, of all those who are in receipt of charitable relief of any kind, among Eurasians of all degrees of mixed blood is as high as 22·3. The causes of this excessive pauperism were shewn to be partly the increase of education among the natives of Bengal leading to sharper

Pauperism among Europeans and Eurasians.

competition for employment, partly inherent defects of character common among Indo-Europeans, which often impede and weaken them in the struggle for existence, and partly, and most important of all, the injudicious administration of charitable relief, which by demoralizing the recipients of such aid, has contributed in no small measure to aggravate the evil. The relieving agencies of Calcutta, its charitable societies, its homes, and schools, and hospitals, control funds which in the aggregate are sufficient to meet even the present congested demand for relief; and if they are properly administered, not only will pauperism be diminished, but distress can be absolutely stamped out. The principles advocated by the Committee are that the condition of idle paupers should be made less eligible than that of the independent poor, that indoor relief should be the rule and outdoor relief the exception, and that relief in aid of wages should be, if possible, avoided.

In dealing with the remedies proposed by the Committee to counteract the prevailing tendencies in the direction of ever-increasing poverty, the Lieutenant-Governor confined himself mainly to a careful consideration of the means by which practical effect could be given to three schemes, of which two are intended to provide new sources of employment, and the third to promote the better organization of charitable relief. Either of the two former will involve a not inconsiderable expenditure. One of them is the proposal to form an Indo-European regiment, and this the Lieutenant-Governor has recommended to the favourable consideration of the Government of India, with the proviso that the new regiment shall take the place of a native and not of a British regiment. The second proposal to establish a training-ship in the river Hooghly for Indo-European boys could hardly be undertaken with an assurance of ultimate success. Even if Indo-European boys could be induced to adopt the sea as a profession and to inure themselves to the perils and hardships of a sailor's life, there remains much doubt as to the possibility of obtaining employment for them either as seamen or as ship apprentices. In view of this uncertainty, the cost of carrying out the scheme would be prohibitive, and in its present shape the proposal must be abandoned, but the Lieutenant-Governor is not without hope that some cheaper substitute may be found practicable.

The Committee's third remedy, namely, the better organization of charitable relief, is a matter in which it is impossible for Government, as such, to take any action; but the Lieutenant-Governor has expressed his general concurrence with the views of the Committee, and approves their proposal that the District Charitable Society should undertake to deal with all cases which in England would come within the operation of the Poor Law, leaving to the remaining charitable agencies those cases to which private charity is suitable. In order to carry out this division of work, some central authority will be necessary to investigate cases of destitution, to decide to which of the two classes they belong, and otherwise to assist the various agencies in working harmoniously together. This work of a "Charity Organization Society" might be undertaken by the District Charitable Society, in addition to the duties assigned to it by the Committee. It seems to have an organization suited for the purpose, though it would be necessary to place its constitution on a somewhat wider basis, and to form a Central Committee consisting of representatives of all sections of the Christian religion, together with delegates from existing charitable societies and institutions. The Lieutenant-Governor trusts that an earnest endeavour will be made to overcome the initial difficulties and to organize a practical scheme on

these lines, which will secure the co-operation of the various charitable agencies of Calcutta.

155. A proposal to substitute a fixed annual payment for the variable charge on account of the district post made on zamindars in Bengal under Act VIII (B.C.) of 1862

Zamindari dák cess.

was made by the British Indian Association, and the Postmaster-General was asked to report on it. He submitted a note reviewing the whole zamindari dák system, and suggested, among other things, the fixing of the cess for a period of ten years, and the amalgamation of it for collection purposes with the land revenue. The Board of Revenue was asked to report whether it was possible to amalgamate the zamindari dák cess with the land revenue and road cess for collection purposes, and subsequently Mr. W. C. Macpherson, C.S., on special duty, was desired to consider the matter, and, if it was not possible to keep the accounts of the cess in the same tauzi-ledger as the land revenue and road cess, to devise a form of tauzi-ledger for the dák cess. The Postmaster-General's report showed that practically no changes in the zamindari dák lines or expenditure were anticipated in the next few years, and Sir Charles Elliott being satisfied that the cess should be fixed for at least five years beginning from January 1893, desired the Board of Revenue to determine, in consultation with all Collectors, what the rate should be in round figures for each district, and with which revenue instalment the cess should be collected. It was decided at the same time that estates which pay less than Rs. 50 as land revenue in consequence of partitions should not be exempted under section 8 of the Act from payment of the cess; and that the arrear list should be made up (in a prescribed form) as nearly as possible 30 days after the kist, and that the penalty under section 9 of the Act should then be added.

156. During the year the standing orders in force with regard to the tours to be undertaken by all Administrative and Executive Officers were examined, and fresh instructions

Tours of officers.

were issued in supersession of all previous rules on the subject of the duration and objects of tours. The Lieutenant-Governor called attention to the great importance which he attaches to personal supervision and communication between the Heads of Departments and the Chief Executive Officers and their subordinates, and to close and minute inspection by them of all branches of the offices and of the work done by the subordinate officers. Specific orders on the subject were issued in the case of each Head of Department and class of officers, prescribing the minimum period during which each is required to be on tour and the reports to be furnished.

157. The passing of Act XI of 1891, amending the Indian Factories Act, XV of 1881, in several important particulars, necessitated a revision of the Factory Rules, and a

The Factory Act.

Committee, presided over by Mr. A. Smith, Member of the Board of Revenue, and representing commercial interests and native public opinion in the persons of Raja Peary Mohun Mookerjee, C.S.I., and the Hon'ble J. L. Mackay, C.I.E., was appointed to draw up revised rules for the approval of Government.

The rules submitted by the Committee were subjected to public criticism for the prescribed period, and finally promulgated under the authority of the Lieutenant-Governor as rules under the Factory Acts. About the same time a Resolution was issued setting forth in detail the changes made in the law by the passing of the Act of 1891. Besides giving an extended meaning to the

term Factory, further restrictions have been imposed upon the employment of women and children, and an interval during the day for rest and a holiday on Sunday have been made obligatory with some small exceptions for all operatives.

Magistrates of districts will continue as heretofore to be Inspectors of Factories, except in the 24-Parganas, where the Joint-Magistrate has been appointed Inspector. In addition to them, Civil Surgeons of districts and certain medical officers in the 24-Parganas have been appointed Joint-Inspectors, and empowered to certify to the ages of children under the provisions of the Act, and in order to ensure stricter watchfulness over the machinery and the structures of the factories, an Engineer-officer has been appointed Special Inspector for Bengal and the North-Western Provinces.

158. In 1885 the Government of India suggested that steps should be taken towards the collection of more precise information regarding the castes and occupations of the people of India, and Mr. H. H. Risley, c.s., was selected to prosecute ethnographic researches, from which, apart from the scientific results, substantial administrative benefits were anticipated. As the result of Mr. Risley's enquiries during six years, two volumes were brought out in the year 1891-92, containing the ethnographic Glossary of all the castes, tribes, sub-castes and sections, of which a substantial number of representatives is found in Bengal, with an introductory essay on caste in relation to marriage. These volumes were welcomed by the Lieutenant-Governor as an important addition to the stock of official information available on the subject and as a valuable contribution to scientific research. It is true that a complete knowledge of the caste system of India will not be obtained from the study of the ethnographic Glossary alone. The greatest and purest castes of India, the Brahmans and Rajputs, are (with the exception of the Maithila Brahmans of Bihár) exotics in Bengal, and it is only in Upper India, the country of their origin, that a full understanding of their main permanent subdivisions, and of the mutual relations of those subdivisions, can be obtained; but still much learned information is contained in the Glossary respecting these clans or individuals of those castes who have emigrated into Bengal, and whose descendants have established local sub-castes with local customs of their own. The work contains the most complete account that has hitherto been put on official record with regard to the numerous lower castes which have sprung up in Bengal, and to the representatives of the aboriginal races, who have more or less come under Hinduising influences. As a dictionary of the castes and their occupations, the Glossary is calculated to be useful to the Administration. The more Government officers know about the religious and social customs of the people of their district, the better able they will be to deal with either the possible social problems of the future, or with the practical questions arising in their ordinary work, such as the relations of different castes to the land, their privileges in respect of rent, their relations to trade, their status in civil society, their internal organization, their rules as to marriage and divorce, and as to the giving and receiving of famine relief. It is believed that Bengal is the only province in which any sustained attempt has been made to carry out the wishes of the Government of India with respect to the investigation of castes and occupations originating from the Census of 1881. This work affords a substantial frame-work on which further enquiries can be instituted and their results incorporated.

The two volumes of the Ethnographic Glossary have been circulated to all Commissioners, District and Subdivisional Officers, and other persons interested, and their criticisms invited with a view to supplement in a later edition the deficiencies incidental to such an undertaking. A scheme which Mr. Risley submitted in outline for the continuation of ethnographical researches in the Lower Provinces, and for their extension to the other parts of India, has been laid before the Government of India.

Mr. Risley also laid before Government two volumes containing his *Anthropometric Data* or series of tables of figures showing the results of measurements carried on under his orders on the methods approved by European anthropologists, of the physical characteristics of certain selected castes and tribes. The conclusions to be deduced from these contributions are awaited.

PART II.



REPORT

ON THE

ADMINISTRATION OF BENGAL, 1891-92.

REPORT FOR THE YEAR 1891-92.

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ADMINISTRATION OF BENGAL, 1891-92

I.—POLITICAL.

Changes of Administration.

THE fourfold classification of estates hitherto adopted for purposes of land revenue administration appeared to be wanting in logical arrangement, and has been replaced by a threefold classification as follows:—

I.—Permanently-settled estates.

II.—Temporarily-settled estates—

(a) Those settled with proprietors for periods.

(b) Private estates leased to farmers for periods.

(c) Government estates leased to farmers for periods.

III.—Estates held direct by Government, viz.—

(a) Those managed for proprietors.

(b) Those owned by Government as proprietor.

In view of the extensive operations which the survey and record of rights in Bihár and the settlement in Orissa and elsewhere in Bengal will entail during the next few years, it was proposed to the Government of India that Colonel Sanden

Lieutenant

surveys in this Province will be completed within a period of five years from 1st April 1892.

A proposal was long under consideration to amend the Bengal Court of Wards' Act IX (B.C.) of 1879, so as to empower the Court of Wards, where desirable, to take charge of encumbered estates on the application of the proprietors, and to provide against any valid charges being created against property vested in the Court by a disqualified proprietor, who might run into fresh debt during the period of disqualification. During the year under report an Act was passed by the Supreme Legislative Council, being Act IV of 1892, which has not only given effect to the above proposal, but has also enabled the Court of Wards to take charge of a share of an estate, other than an undivided share held in coparceny as the property of a Hindu joint-family governed by the *Mitakshara* or *Mithila* law.

The reconstitution of forest charges mentioned in last year's report has now been completely carried out, and the result is that there are now twelve independent forest divisions in place of eight, including Direction, but excluding the Working Plans Division, which has also been abolished because there was no officer available to keep it up. By these changes, which were rendered necessary by the paucity of the staff of the Forest Department, it has been sought to economize the services of individual officers to the best advantage, and to promote general efficiency.

In modification of the rules for the recruitment of the Opium Department, which prescribed that every fourth vacancy in the Opium Department should be reserved exclusively for natives of India of unmixed descent, orders were issued in September 1891 to the effect that these recruits should be selected by the results of a competitive examination, instead of, as hitherto, without examination. The first examination under these orders was held in March 1892, and the candidate who obtained the highest aggregate of marks, Babu Mohima Nath Bhattacharyya, B.A., was appointed to the Opium Department as an Officiating Assistant Sub-Deputy Opium Agent, Benares Agency, after the close of the year.

Though these tracts were formed into a district charge with effect from the 16th December 1891, affairs in Keonjhar rendered it necessary to depute Rai Nanda Kishore Das Bahadur, the officer in charge of the new district, to duty in that State, and, owing to the difficulty of filling his place, the district of Angul was for over six months without an officer in charge. Mr. H. P. Wylly has now been appointed to officiate for Rai Nanda Kishore Das Bahadur during the remaining period of his deputation.

In January 1892 a conference met at Calcutta to discuss civil and military matters connected with the control of the Chin Lushai Hills, and the Government of India have since decided, in accordance with the recommendations of the conference, that the whole of the Lushai country should be under the Chief Commissioner of Assam, and that the Chittagong district should also be transferred from Bengal to Assam as soon as the settlement operations now in progress have been brought to an end. It has also been decided that if the settlement cannot be finished within the current year, or if it is found that there are difficulties in the immediate transfer of the entire district, the subdivision of the Hill Tracts should be transferred in advance of the rest.

Relations with Tributary States, and Frontier Affairs.

TRIBUTARY STATES OF ORISSA.
Administrative changes.
 DURING the year under review, the estates of Angul and the Khondmals were formed into a separate district in charge of an officer under the immediate supervision of the Superintendent of the Tributary Mahals. Rai Nanda Kishore Das Bahadur, Assistant Superintendent of the Tributary Mahals, was appointed to the charge of the district thus formed with effect from the 16th December 1891. He was succeeded in his appointment as Assistant Superintendent by Babu Sudam Charan Naik, Manager of the Dhenkanal State, who assumed charge of his new office on the 12th February 1892.

Two other events of administrative importance took place during the year, viz., the death of Raja Ram Chandra Birbar Harichandan of Talcher, and an insurrection of the Bhuyas of Keonjhar against their Maharaja. The former occurrence took place on the 18th December 1891, only four days after the Raja's return from a pilgrimage to the North-Western Provinces and Puri. Having no legitimate heir, he was succeeded by his adopted son, a boy of about eleven years of age, and the State was taken under the management of Government. The events in Keonjhar resulted in the Maharaja's flight to Cuttack and his final restoration accompanied by Rai Nanda Kishore Das Bahadur as Government Agent. The oppressions and exactions of the Maharaja were the immediate cause of the disturbances, which were promptly suppressed by the local officers with the aid of the Government police. A detachment of troops from Calcutta was also ordered under arms, but was only held in reserve and not called into action. Although all active resistance on the part of the insurgents appears to have now ceased, and the Maharaja has been duly restored, the Bhuyas, in spite of the efforts of the Government Agent towards reconciling them, still hold aloof, and will neither pay the revenue due from them nor allow the payment of revenue by those under their influence. A proclamation has recently been issued warning them of the serious consequences of continued contumacy, and if this warning is neglected they will during the coming cold weather be reduced to submission by force, and their ringleaders, if necessary, deported.

Tours of the Superintendent and Assistant Superintendent.
 The Superintendent was on tour in the Tributary Mahals, including Angul and the Khondmals, for 90 days, during which time he visited the States of Keonjhar, Khandpara, Daspalla, Boad, Athmallik, Dhenkanal, and Nilgiri, and also met the Managers of Baramba and Narsingpur near the borders of their respective States, and discussed with them all pending affairs of importance. Rai Nanda Kishore Das Bahadur and his successor, Babu Sudam Charan Naik, spent between them 76 days in the States, and visited the States of Khandpara (twice), Daspalla (twice), Talcher, Pal Lahera, Hindol, Baramba, Tigiria, Dhenkanal, and Athgarh. The Magistrate of Puri, as *ex-officio* Assistant Superintendent of the Tributary Mahals, visited Ranpur and Nayagarh. Every one of the Tributary Mahals was thus visited at least once during the year, with the exception of Moharbhauj.

General condition of the people.
 The rainfall during the year was sufficient on the whole, though unevenly distributed, and the rice harvest was a fair average one in all the States except Athmallik, Khandpara, Narsingpur, Nayagarh, and Ranpur, where the crops were poor. Although prices were high, the general condition of the people was fairly good, and the large export of food-grains to Madras and other provinces, while raising prices, enabled the people to dispose of their surplus produce to the best advantage, and thus, instead of causing distress, contributed largely to their prosperity.

Public health and vaccination.
 The public health throughout the States was fairly good during the year, and calls for no special remark. There is a dispensary in every State, with the exception of

Athgarh, Daspalla, Khandpara, Nilgiri, and Tigiria, while in Dhenkanal and Moharbhaj there are two and three dispensaries, respectively. There are in the States altogether 15 dispensaries, which during the year relieved 41,411 patients (of whom 423 were indoor patients) at a cost of Rs. 18,006, compared with 32,936 patients at a cost of Rs. 15,579, the average figures for the preceding three years. The Superintendent has been asked to use every endeavour to persuade those Chiefs who do not at present maintain any dispensary to confer this boon on their people. During the year the system by which vaccinators were sent from Cuttack for work in the Tributary Mahals was put an end to, and salaried vaccinators were appointed for each State or group of States to operate themselves, and to instruct and assist the local inoculators in practising vaccination. The number of operations performed during the year was 17,437, against 21,613 in 1890-91. There are many obstacles and prejudices to be overcome before vaccination is likely to be freely accepted by the people, but several of the Chiefs have shown their willingness to encourage it in their States, and there is reason to hope that steady progress will be made in future. This is at present the only point in which the Chota Nagpur States show better results than those in Orissa, the former States with only half the population showing 25,799 operations during the year.

The number of schools in the States was 1,207 with 15,626 pupils, against 1,136 with 14,894 pupils in 1890-91. During the year 27, 18, and 11 new schools were opened in the States of Athmalik, Dhenkanal, and Hindol, respectively. The number of aboriginal students fell from 1,467 in 1890-91 to 1,338 in 1891-92, owing principally to the entire Bhuiya population of Keonjhar having abstained from sending their children to the schools established by the Maharaja. The total expenditure incurred during the year on education amounted to Rs. 74,152, of which only Rs. 3,117 was borne by Government, against Rs. 65,641 and Rs. 7,469, the average figures for the three preceding years.

The total number of excise shops in all the States was 759 in 1891-92, compared with 786, the average number for the years 1888-89 to 1890-91. The decrease is due to large reductions in the number of shops in Dhenkanal and Moharbhaj. During the year 31 new country spirit shops were opened in the State of Boad, and this State now contains 177 shops out of a total of 472 for all the States (excluding Athgarh). The total excise revenue derived by all the States (except Athgarh) from a population of 1,660,107 was Rs. 37,793, against Rs. 33,581, the average for the preceding three years. The increase does not appear to be unduly rapid, and the revenue at present amounts only to Rs. 22 per thousand of population, which is much the same figure as in the Chota Nagpur States, and much less than the figures of the neighbouring British districts of Cuttack, Puri, and Balasore, which show an excise revenue of Rs. 137, Rs. 105, and Rs. 186 per thousand of population. Several of the Chiefs have shown a disposition to break through the arrangement under which no liquor or other excise shops shall be established within three miles of the frontier, and the Lieutenant-Governor has recently issued strict orders for its enforcement.

The total mileage of roads in the States was 642½, and the expenditure on roads and other public works Rs. 46,234 and Rs. 48,555, respectively. No new works of importance were undertaken by any of the Chiefs, but the survey of the proposed Sambalpur-Khurda Railway was completed during the year. It would seem that many of the Chiefs, while outwardly professing to be fully alive to the advantages of the proposed railway, are suspicious of the consequences of the greater accessibility thus given to their States.

The police force of the States amounts to 109 officers and 552 men, being 7 officers and 39 men above the average of the preceding three years. The expenditure incurred in maintaining this force was Rs. 52,358, or Rs. 79 per man. The Chota Nagpur States maintain a force of 59 officers and 253 men at an average cost of Rs. 46 per man. The number of persons brought to trial for criminal offences in the 15 Orissa States which submitted returns was 8,202 out of a population of 1,639,561, or 5 per mille. In the Chota Nagpur States the proportion is only two per mille of the population,—a result

probably due to inferior reporting and detection of crime. Of the 8,202 persons brought to trial in 15 of the Orissa States, 3,418 were convicted, 4,262 acquitted, 73 died, escaped, or were transferred, and 449 remained under trial at the end of the year. The percentage of acquittals is abnormally high in most of the States, and especially in Dhenkanal, and seems to imply want of caution in allowing prosecutions to be instituted. Of 32 persons committed for trial, 18 were convicted, 9 acquitted, and only 5 remained under trial at the end of the year—a very satisfactory result. During the year five original criminal cases were tried by the Superintendent and Assistant Superintendents, in which 8 persons were convicted and 6 acquitted. The value of property stolen and of that recovered was Rs. 24,260 and Rs. 7,878 respectively, the percentage of recovery being 32·47—a result which is not unsatisfactory. The total number of civil and criminal cases in all the States has risen from 13,885 and 3,692 in 1888-89 to 14,531 and 4,282 respectively in 1891-92. The increase, though slow, is an indication that the people are gradually availing themselves of the facilities afforded for the redress of their grievances.

Registration and stamps. The registration of deeds shows a steady increase. In the States of Baramba, Dhenkanal, Moharbhaj, Narsingpur, and Pal Lahera rules were promulgated by Government in 1887, and have been in force for some time past. Most of the other States have optional systems of registration of their own. In Baramba, Dhenkanal, Moharbhaj, and Narsingpur special judicial stamps are in use, and were sold to the value of Rs. 6,694, Rs. 7,773, Rs. 7,930, and Rs. 13,166, respectively, in the four years 1888-89 to 1891-92. The above figures would appear to indicate, as far as such limited figures can show anything, a gradual increase in the general prosperity of the people.

Census. The census of the Tributary States was taken at the same time with that of the British districts, and with the result that the population was found to be 1,696,710, against 1,410,183 in 1881. The operations were carried through by Rai Nanda Kishore Das Bahadur, and the Chiefs cordially co-operated in carrying out the work. The large increase of 286,527 over the figures of 1881 is no doubt partly due to better enumeration.

Moharbhaj. The State of Moharbhaj is now under the management of its Chief, who has had a good education and shows signs of his appreciation of the liberal training he has received. His position is beset with many difficulties, but he may rely on the support of Government in any attempts he may make for the improvement of his State and the promotion of the interests of his people.

THE TRIBUTARY AND POLITICAL STATES OF CHOTA NAGPUR. Although the Commissioner could not visit any of the States during the year, he kept himself well acquainted with what was going on in them, and had interviews with the Rajas of Bonai, Seraikella, Gangpur, and Jashpur, the Thakurs of Kharsawan and Kera, and several of the zamindars of the Tributary States..

General condition of the people. The material condition of the people during the year was worse than in the year 1890-91. Except in Gangpur, the rainfall was everywhere insufficient and unevenly distributed. The high prices of food-grains following on the partial failure of the crops were still further raised in Seraikella, Kharsawan, and Gangpur by the demand caused by the employes of the Bengal-Nagpur Railway, and the facilities given by the opening of the railway to the export trade. In Sirguja the poorer classes were pinched, and the Maharaja found it necessary to order general advances of seed and food-grain. The year was more unhealthy than its predecessor. Fever, cholera, and small-pox caused heavy mortality in almost all the States. Cattle-disease also prevailed in Jashpur, Gangpur, Korea, and Sirguja.

Medical and vaccination. The only dispensary in the States is that at Bistrampur, the head-quarters of Sirguja. In the years 1889-90 and 1890-91, this dispensary served 1,130 and 1,002 patients, and the Maharaja expended on it each year a sum of Rs. 1,016. During 1891-92, however, the dispensary was closed for ten months of the year, the expenditure on it was Rs. 365, and the number of patients treated only 30. The establishment of a dispensary at Dharamjaigarh in Udaipur is in contemplation, the Raja having

already entertained the services of a Native Doctor. The present absence of dispensaries in the States is most unsatisfactory, and the Commissioner has been asked to take every opportunity of impressing on the Chiefs the great importance of providing medical treatment for the sick among their subjects. Vaccination, on the other hand, is the most satisfactory feature of the year's administration. The number of operations performed has risen from 17,723 in 1890-91 to 25,799—a number over 8,000 in excess of those performed in the Orissa States. Operations were for the first time carried on during the year in Udaipur, and there was a great increase in the number of cases in Gangpur and in the Political State of Seraikella.

Education.

The number of schools in the States rose from 38 to 39, but the number of pupils fell from 1,091 to 963, and the number of aboriginal pupils from 282 to 233. During the year the Government education grants hitherto made to the Political States of Seraikella and Kharsawan were withdrawn. This has had no bad effect on education in the former State. In Kharsawan, however, the Thakur only maintained 8 schools with 239 pupils, against 9 with 393 pupils in the previous year. The large falling off in attendance was due to the prejudice of Uriya and Bengali parents against sending their children to schools attended by boys of the aboriginal classes, which, though kept under while the schools were under direct Government supervision, has led to the exclusion to a certain extent of the aboriginal classes since the withdrawal of the Government grants. Three candidates from the Seraikella school and two from the Kharsawan school competed at the last Primary Scholarship Examination; both of the latter and two of the former were successful.

Roads and communications.

During the year the Raja of Udaipur constructed 16 out of 24 miles of a road from Dharanjaigarh to Sakti. The Raja of Gangpur also constructed a new road from Sudi, his capital, to Bhushmah, a village on the Sambalpur border, with a view to connecting his State with the railway at Jharsogra. These two roads will open out the States of Gangpur and Udaipur, and the Maharaja of Sirguja will be requested to improve the line connecting his capital, Bistrampur, with Dharanjaigarh. The Raja of Seraikella spent Rs. 278 and the Thakur of Kharsawan Rs. 500 in the construction of village roads.

Excise.

The number of licensed excise shops of all kinds in the States during the year was 810, compared with 754, 797, and 814 in the three preceding years. The excise revenue of the States has steadily risen from Rs. 18,818 in 1888-89, Rs. 18,351 in 1889-90, and Rs. 19,126 in 1890-91, to Rs. 20,004 in 1891-92, the principal increase in the year under review being in Kharsawan and Seraikella, where the revenue from this source rose from Rs. 2,047 and Rs. 5,773 to Rs. 3,000 and Rs. 6,648 respectively. In Sirguja and Udaipur there was a considerable falling off in revenue, due probably to bad times. The incidence of excise revenue in the Chota Nagpur and the Orissa States is almost exactly equal, viz., about Rs. 22 to every thousand of the population.

Census.

The recent census shows that the population of the States increased from 569,813 in 1881 to 764,525 in 1891. The large increase of 191,712 may to a great extent be attributed to better enumeration. The opening of the Bengal-Nagpur Railway has also brought residents from outside districts into the States bordering on the line of railway.

There was a decided increase in reported crime, the total number of cases and of persons under trial during the year being 722 and 1,495 respectively, compared with 671 and 1,243 in 1890-91. The principal increase was under the

Police and the administration of justice.

head of theft, which showed an increase in every State except Bonai, Chang Bhakar, and Seraikella. Of 1,495 persons tried, 840, or about 56 per cent., were convicted. Seven cases with 23 prisoners were committed for trial during the year, against 17 cases with 29 prisoners in 1890-91. Nine persons were convicted and 1 acquitted, and 4 cases with 12 prisoners were pending trial at the close of the year, against 1 case with 1 prisoner at the close of 1890-91. There were altogether 446 prisoners in the jails of the various States during the year, compared with 383 in the previous year. There were 11 deaths and 5 escapes, compared with 4 and 20 in 1890-91.

The number of civil cases rose from 703 to 833, and the number of such cases pending at the close of the year from 180 to 239, the principal increase being in Jaahpur, Gangpur, Seraikella, and Kharsawan. Execution cases rose from 127 to 199, of which 90 against 66 were pending at the close of the year.

The conduct of the Chiefs during the year has been marked by a satisfactory display of loyalty. During the Keonjhar rebellion of May, 1921, the Raja of Sambalpur and

supplied a hundred men fully equipped for the assistance of Government, who rendered valuable aid to the police. The Raja's services on this occasion have been acknowledged, and a valuable gun with a suitable inscription having been awarded him by Government, was personally delivered to him by the Lieutenant-Governor when he was at Chaibassa. The Raja of Udaipur also volunteered for service in Keonjhar with his police and a body of matchlock men, and though occasion did not arise for taking advantage of this offer, the loyal spirit in which it was made deserves every recognition. Beyond the dispute between the Raja of Seraikella and his raiyats, no definite troubles connected with the internal affairs of the States came to notice during the year.

General comparison between the
 Chota Nagpur and the Orissa
 States.

States in Origin:—

The following table compares the condition of the Tributary States of Chota Nagpur under all important heads with that of the corresponding

	Area in square miles.	Population.	Total revenue.	Number of villages.	Hippodamias.	EDUCATION.			Miles of road.	EXPENDITURE ON PUBLIC WORKS.		Police.		BUREAU.		Quantities of all sorts brought to land.	Cost of water tested.	Expenditure on public works.	Grain supplied.
						Students.	Scholars.	Pupils.		Bonds.	Other public works.	Officers.	Men.	Expenditure.	Shops.				
Orissa.			Rs.					Rs.		Rs.	Rs.		Rs.		Rs.				
Atharva	108	31,000	(a).....	40	400	177
Atharva	700	31,000	31,000	40	400	177
Baramba (d)	124	31,000	31,000	40	40	400	177
Baram	1,300	31,000	31,000	116	40	400	177
Baramba	1,000	31,000	31,000	40	400	177
Baramba (d)	1,400	31,000	31,000	104	40	400	177
Baram	310	31,000	31,000	40	400	177
Baramba (d)	3,000	31,000	31,000	1,000	40	400	177
Baram	344	31,000	31,000	40	400	177
Baramba (d)	4,214	31,000	31,000	13,270	40	400	177
Baramba (d)	100	31,000	31,000	40	400	177
Baramba	100	31,000	31,000	40	400	177
Baramba	204	31,000	31,000	40	400	177
Baramba (d)	400	31,000	31,000	40	400	177
Baramba (d)	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
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Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
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Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177
Baramba	310	31,000	31,000	40	400	177</											

4th Floor: not needed

(b) **States under Governmental Management.**

* + Dec. 25 from Government.

* Some roads unimproved. Figures of old roads not summed.

1. The Board of Directors shall have the authority to:

This is a valuable statement in so far as it shows the extreme backwardness of the Chota Nagpur States compared with those of Orissa. With a greater area, they contain only half the population, and have only one-sixth the revenue of the Orissa States. While nearly every one of the Orissa States has a well-attended dispensary at its head-quarters, there is in the Chota Nagpur States only one dispensary, and that was closed for ten months of the year under review. While the Orissa States maintained 1,207 schools with 15,626 pupils, and expended Rs. 53,569 on education in 1891-92, those of Chota Nagpur maintained only 39 schools with an attendance of 963, and at a cost of Rs. 3,942. The Orissa States contain, according to the very imperfect figures available, 642½ miles prepared roads, while the Chota Nagpur States have only 250½, and the expenditure on roads and public works in the Orissa and Chota Nagpur States is very nearly as 20 to 1.

The relations of the Kuch Bihar State with the British Government continued to be friendly and satisfactory. A railway

KUCH BIHAR.

from Gitalda to the town of Kuch Bihar, for which the Government of India have sanctioned, on certain conditions, a loan of Rs. 8,00,000 to His Highness the Maharaja, is now under construction. Important reforms were introduced during the year in the administration of the State, which include arrangements for the regular and thorough inspection of the courts and offices in the State. Mr. E. E. Lewis, formerly of the Indian Civil Service and lately Commissioner of the Rajshahi Division, took over charge of the office of Superintendent of the State and Vice-President of the State Council in December 1891, and he is using wisely the experience gained in Government service for the improvement of the administration in all its branches.

The financial results of the year show a surplus of Rs. 1,00,681, the receipts amounting to Rs. 18,92,405 and expenditure to Rs. 17,91,724, against Rs. 17,99,981 and Rs. 17,78,917 respectively of the previous year. His Highness has taken the necessary steps to improve the system of collection of land revenue in his State, and measures have been adopted for the realisation of arrears.

The tract known as the South Lushai Hills, with an area estimated at 24,000 square miles, was constituted a British district and styled a Superintendency under the Lieutenant-Governor of Bengal on and from the 1st April 1891.

SOUTH LUSHAI HILLS DISTRICT.

The first Superintendent, Mr. C. S. Murray, C.I.E., was transferred to the Chittagong Hill Tracts, and was succeeded on the 16th April 1891 in the appointment by Captain J. Shakespear, D.S.O., Leinster Regiment, who since 1888 had served in these hills, first as Intelligence and then as Assistant Political Officer. Captain Shakespear assumed charge of the district on the 16th April 1891, and his first efforts were directed to the dislodgment of the Chief Jakopa, at whose hands Mr. Murray had sustained a serious reverse a few months before. The expedition undertaken was completely successful; Jakopa's village was destroyed, and he himself fled far away, and has never attempted to return. The result was the final subjugation of the Moliempui tribe. The other leading events of the year were the darbar held at Lungleh in January 1892, at which all the hill Chiefs who attended swore friendship with one another; the tours of the Superintendent and of his officers, and especially the meeting with Mr. McCabe, Political Officer, North Lushai Hills, at Kairuma, and the settlement of the boundary between the North and South Lushai Hills; the capture of the Shendu Chief Dokola and his deportation to Hazáribágh, and, above all, the serious disturbances in the Howlong country on the northern frontier, which were put down with the assistance of a column sent from Fort White by the Chief Commissioner of Burma. The actual expenditure incurred during 1891-92 in the administration of the South Lushai Hills amounted to Rs. 7,50,706. This amount does not include any military outlay proper which would be borne by the Military Department.

In March 1892 the Bengal Military Police Act V of 1892 was passed by the Supreme Legislative Council with the object of improving the position of the frontier police employed in the South Lushai Hills, and of constituting a body of military police in other districts.

Frontier Police.

The Act came into force on the 1st May 1892, but owing to the disturbances in the hills it has not been possible to give effect to the provisions of the Act by formally enrolling the officers and men of the frontier police as military police officers under section 3. The Government of India have ordered that the force shall in future be designated the Bengal Military Police, Lushai Battalion.

The conversion of the Chittagong Hill Tracts into a subdivision was noticed in last year's report. Mr. C. S. Murray, C.I.E., late Superintendent of the Lushai Hills, was

CHITTAGONG HILL TRACTS.

appointed to the charge of the subdivision as Assistant Commissioner, under the direct supervision of the Commissioner of Chittagong. The change, which was formally ratified by the Secretary of State on the 28th July 1892, will effect a saving of Rs. 23,508 per mensem. The administration of these tracts was uneventful during the year, and the only important orders which call for remark relate to the modifications made in the system of revenue administration of the tracts. The system hitherto in force was the result of Sir Richard

Temple's orders of 1876, as modified by the rules of 1884, based on Sir Ashley Eden's orders of 1878. Sir Richard Temple laid down that the jurisdiction of the Chiefs must be regarded by local boundaries instead of by tribal distinctions. The rules of 1884, while recognizing the geographical jurisdiction of the Chiefs, provided also for the extension of their tribal jurisdiction beyond the geographical limits; thus every hillman living in the circle of the Chief of another tribe was to pay, not only the full jhum tax of Rs. 4 to his own Chief, but a further tax of Re. 1 to the Chief of the tract in which he resided. The rules otherwise attempted to restrict and penalize migrations, the object being to consolidate and localize each tribe round its own Chief. The rules failed in this respect. The Chiefs were powerless to enforce the payment of tribute from tribesmen who had passed far beyond their geographical jurisdiction, and owing to the largeness of the mountainous area, the officers of Government could render very little help in this respect. On the recommendation of the local authorities, the Lieutenant-Governor in February 1892 decided to give absolute effect to the orders recorded by Sir Richard Temple in his Minute of July 1876; and a few simple clear rules were enunciated, that all hillmen were to be subject to the jurisdiction of the Chief within whose territory they resided or cultivated. Local limits were defined for each headman, dewan, and superior Chief, and advantage was taken of this system to regulate and develop the land revenue of the hills. The old rules for plough cultivation were cancelled, and in future any suitable person wishing to open plough cultivation would be permitted to do so.

The administration of the Hill Tippera State was successful financially, and the liquidation of debts engaged the careful attention of the administration. During the two years the State has been under the charge of Rai Umakanto Das Bahadur, the debts have been reduced from Rs. 10,50,569 to Rs. 5,59,611. The Lieutenant-Governor has been very glad to support the decision of the Maharaja to have a survey and record of rights made of his zamindari in British territory, and he has assured His Highness that every assistance will be afforded by the Bengal Government in furtherance of this work. Education has made satisfactory progress. The number of schools and pupils has risen from 19 and 624 to 27 and 857 respectively. The number of persons receiving medical aid at the charitable dispensaries has also risen from 5,079 to 7,040. The results of the census of 1891 show that the population has increased from 95,637 to 137,442 in ten years.

The Raja of Sikkim was given permission to reside during the rains at either Tumlong, Guntok, or Robdenchi. He chose the latter, and went there in February 1891. In October the Council requested him to return to Guntok, but he refused. The Lieutenant-Governor

SIKKIM.
Administration.

then issued orders that it was expected of him that he would immediately return to Guntok, and also that his son should be brought for education from Tibet. It was added that if the Raja should not comply with these demands, all pecuniary allowances would be stopped, and that in the last resort measures should be taken to bring him to Guntok. The Raja took no notice of these orders, and in January 1892 the Assistant Political Agent visited Robdenchi and did his best to induce him to come into Guntok, but without success. In March the Raja left Robdenchi and endeavoured to find his way into Tibet *via* Nepal, but he was arrested by the Nepalese authorities, who placed themselves in communication with the Government of India, and eventually escorted the Raja to the Darjeeling district, where he is now detained. These events belong properly to the history of the present year. During no period of the past year did the Raja take any part in the administration of the affairs of the State, which were conducted by the Assistant Political Agent and the Council, consisting of the Phodang Lama, the Khansa Dewan, the Show Dewan, the Jerung Dewan, and the Rhenok Kazi, and they have acted together in complete agreement.

Perfect quiet prevailed throughout the year in Sikkim, and the revenue administration during the three years which have elapsed since Mr. White's appointment, has been most satisfactory.

The land revenue has steadily expanded under the system of survey and settlement which was sanctioned in 1889. It is collected by the old and

recognised territorial officials known as Kazis, who get a percentage for their share and are entitled to demand no more. The forest revenue is derived from tea-planters, who are allowed to cut *toon* wood under licenses for their tea chests. The felling of timber in *sāl* forests has been stopped for the present. The excise revenue which is derived from the lease of liquor-shops at auction shows steady expansion. The principal item of expenditure is on public works, and during the past year about Rs. 20,000 were spent on roads and more than Rs. 6,000 on bridges. The allowance to the Raja, which was stopped after November last, is Rs. 500 a month, and an additional allowance of Rs. 50 a month is made to the Raja's sister.

There was much less rain this year than usual, but the crops were in good condition at the end of June. In July large flights of locusts visited many of the valleys and did considerable damage to the crops. Rice was very slightly damaged, but bhutta, barley, wheat, potatoes, and turnips were almost entirely destroyed. The damage done is now being felt on account of the scarcity of grain and consequent high prices. Advances have been made to many of the kazis and raiyats to enable them to tide over the present period. The general health of the people was good, although during the last three months of the year there was a considerable mortality from influenza, small-pox, and dysentery. The dispensary established at Guntok proved of benefit to the people and was well attended during the year.

Two new veins of copper were found during the year above Rungli, but they have not yet been worked. Tufaceous limestone has also been found in the Rungit in small quantities, but too small to repay the expense of burning.

The Guntok-Tumlong road undertaken during 1890-91 has been finished, and the one from Guntok to the Rangit bridge *via* Rumtek, Song, Temi, Dumthong, and Namchi is nearly completed. The bridges over the Tista and Kamman are in progress, and the former is near completion.

A census of Sikkim was taken under Mr. White's supervision in February 1891; the total population was found to be 30,458. The Lepchas still form a larger proportion of the population than any other tribe. The tract to the immediate north of Darjeeling which constitutes the southern fringe of Sikkim, is peopled by Paharias or immigrants from Nepal. There are the Garungs, Murmis and others shown in the census list. These men are the best cultivators and hardest workers in Sikkim. A line has been laid down following the ridges of mountains north of which these Paharias are not allowed to settle. This arrangement has been made for the protection of the aboriginal inhabitants who people the whole of the central and northern portion of the State. The Bhutias are Tibetan by descent, and must not be misunderstood to be immigrants from Bhutan.

The relations of the Bengal Government with Bhutan have on the whole been satisfactory. The rumour of hostile intentions at one time prevalent appears to have been entirely without foundation. The incident of the kidnapping of an Excise Sub-Inspector, and of the extortion practised on him, has been settled. It was an outrage of no real political importance. The raids on Kamrup are more serious, and the punitive measures to be adopted in consequence are still under consideration. Special police posts have been established on the frontier by the Assam Administration, and the Bhutan authorities have been warned that the cost of this extra police will be deducted from the annual *Pasa* paid under the Treaty. No further trouble is expected in the matter of the boundary between Bhutan and the Western Duars. The policy adopted has been to relay the old boundary line exactly, and no difficulty has arisen with the Bhutan Government in carrying out the orders passed. No measures have been taken to elect a Deb Raja during the year. The Tongsa Penlow still holds the seals of office and is chief in name as well as in fact; and the authority of his Government is reported to be as strong and stable as any which has ever held power in Bhutan.

II.—ADMINISTRATION OF THE LAND.

Survey.

THE following is an abstract statement of the progress made in, and the cost of, survey operations connected either with settlement proceedings or with proceedings for the record of rights in the temporarily-settled, Government, Wards' and private estates in all parts of Bengal:—

ESTATES.	TOTAL AREA SURVEYED—			TOTAL COST—		
	Up to 31st March 1891.	During the year under report.	Total.	Up to 31st March 1891.	During the year under report.	Total.
1	2	3	4	5	6	7
	Acrea.	Acrea.	Acrea.	Rs.	Rs.	Rs.
Government estates	1,412,951	1,238,751	2,651,702	6,81,017	4,44,151	11,25,168
Wards' estates	1,274,092	10,329	1,284,421	4,58,469	55,745	5,14,214
Private estates	544,785	7,647	552,432 (Sonthal Parganas).	23,070	1,116	24,186
Total ...	3,231,828	1,256,727	4,488,555	11,75,556	5,01,012	16,76,568

I.—TEMPORARILY-SETTLED AND GOVERNMENT ESTATES.

The total area to be surveyed in Orissa, as reckoned from the old maps of the revenue survey, is 4,942 square miles, viz., in Orissa. Cuttack, including the permanently-settled irrigated area, 2,239 square miles, in Puri 1,021 square miles, and in Balasore 1,682 square miles. By the end of the year under report the whole of the traverse survey work had been done in Puri, except that of the Satsis Hazari lands belonging to the Puri Temple. In Cuttack, 747 square miles of original traverse work and 136 of revision had been done by the end of March 1892. In Balasore, 35 square miles of traverse work had been completed up to the end of the year. In Cuttack, 426.36 square miles and in Puri 312.18 square miles of cadastral survey were completed during the last half of the year, making a total area of 1,776.46 square miles cadastrally surveyed since the beginning of the operations. To this apparently has to be added 136 square miles of revision survey in Cuttack. The kharapuri work has not kept pace with the survey: up to the 31st March 1892 the Settlement Officer had received the survey records for 686 square miles only, comprising 1,700 villages: he had still to receive the survey records for 352.66 square miles, comprising 537 villages surveyed in the year. The cost of survey was Rs. 2,01,666 during the year.

In Chittagong, the demarcation of the Sadar subdivision was completed before the year began. Towards the close of the year the villages in thana Chakaria were demarcated by a party working under the Settlement Officer, while those in Kutubdia were demarcated by a party of the regular survey. The demarcation work remaining to be done consists of the villages in thana Teknaaf and one village in Moiscal.

In the Sadar subdivision during the year under report an area of 540 square miles was cadastrally surveyed and 202 square miles were topographically surveyed. At the close of the year there remained in this subdivision 78 square miles to be cadastrally surveyed and 266 square miles to be topographically surveyed. In the Cox's Bazar subdivision the survey of old thana Ramu was completed two years ago: in the remaining part of the subdivision

6 square miles were cadastrally surveyed during the year. The survey cost Rs. 1,58,867 during the year, and the total expenditure under this head from the beginning has been (including old thána Ramu) Rs. 3,81,897.

The portion of the Western Duars in Jalpaiguri under survey and settlement is 771.49 square miles. Of this area 706.72 square miles had been surveyed down to the end of March 1891, and 64.77 square miles were surveyed during the year ending 31st March 1892. The cadastral survey work was finished by March 1892, so far as field work is concerned. The total number of *jots* and khas blocks under survey is shown by the Survey Department as 10,891 and by the Settlement Officer as 11,092. The records of 4,303 of these *jots* had been made over to the Settlement Officer by the Survey Department before the 31st March 1891, and those for 5,298 *jots* were made over during the year, making in all records for 9,601 *jots* made over. The expenditure on survey during the year was Rs. 51,710, making Rs. 3,54,408 since the beginning of the operations.

The survey of Calcutta under Colonel W. H. Wilkins was continued during the year. The boundaries of 1,441 holdings were surveyed during the year: of this number 657 are in the Collectorate area and 784 in taluk Sutanati. The number of holdings remaining for survey at the end of the year was 1,865. The number of boundary disputes settled was 241, leaving 312 cases awaiting settlement: the necessary steps are being taken to have these disputes settled as early as possible. The maps, some 236 in number, are all drawn as far as the settlement of the disputes and the attendance of the proprietors of holdings to point out their boundaries permit. Prosecutions were instituted against absentee proprietors in all cases where a conviction was probable, and this has had the desired effect in accelerating the progress of the work.

II.—WARDS' ESTATES.

During 1891 field operations were confined to the cadastral survey of lands which had been omitted during previous seasons in Burdwan and Birbhum. To the end of September 1891 an area of 2,510 acres was cadastrally surveyed in 89 villages in Burdwan and 259 acres in 10 villages in Birbhum, and to the end of March 3,607 acres in 18 villages in tanzi Nos. 1, 2, and 3 in Bankura were cadastrally surveyed, and an area of 205.14 square miles in 355 villages were traverse surveyed in the same district. During the year under report the survey cost Rs. 31,187, the total expenditure to 31st March 1892 being Rs. 1,44,541.

The survey and settlement of this estate was sanctioned under Government Notification dated 8th January 1891, issued under section 101 (2) (b) of the Tenancy Act, on the application of the Magistrate, and on the ground that it was necessary to avert serious disputes between the landlords and their tenants. It was then decided to lay the exterior boundaries by theodolite and to survey the interior by plane table, and the work began under Babu Juan Sankar Sen on the 8th December 1891.

The pargana contains an area of 94 square miles, or 60,160 acres, with 113 villages. Up to the end of March 1892 the following work was done:—

Of the 113 villages in the pargana, the demarcation of 35 was completed, and the boundary disputes in all these, except one village, amicably settled. Eighteen villages were cadastrally surveyed and work tested. Khanapuri was completed and tested in 14 villages, and the existing rent recorded in one.

The cost for survey was Rs. 1,464 for traverse and Rs. 1,590 for cadastral.

At the beginning of the operations in 1889 there were 38 villages with an area of 124.80 square miles belonging to this estate on the main island, and a number of new chars in the river Meghna. Of these 38 villages, one was entirely washed away after the survey. The mainland was surveyed by Party No. 2 of the Survey of India Department in 1889-90, and the chars were surveyed by a detachment of the same party during the year under report. The professional party made a cadastral survey of 36 villages only, and Khanapuri

of 14 small villages only with an area of 17·58 square miles. During the year under report the Settlement Officer did the following survey work:—(a) Cadastrally surveyed two villages with an area of 153½ acres; (b) completed the khana-puri of 16,779 khasra entries out of 145,102; (c) estimated the field areas of the 145,162 khasra entries; (d) converted the field areas into local kanis; (e) completed the khasras of 24 villages, i.e., distributed the area over the several columns; (f) inked up the maps of 24 villages consisting of 116 sheets, 40 of which were partly done up to end of March 1891; (g) prepared the area statements, milan khasra, crop statement, etc., of all the villages; (h) prepared traces of the maps of all the villages.

The survey which has been completed has cost Rs. 39,529, or about 8 annas an acre.

This estate contains 209 villages with an area of 180,664 acres. The survey was completed by the professional party in 1890-91, and the records of 216 villages were made over to the Settlement Officer during that year. The records of the remaining 83 villages were made over during the year under report. The total cost for survey up to the 31st March 1892 was Rs. 99,436.

The settlement of this estate, the lands of which are situated in the Bhāgalpur, Monghyr, Malda, Purnea, and Darbhanga districts, began in November 1887 and was completed during the year under report. On the 11th May 1891, Mr. Collin, who had been in charge of the operations since the beginning, but with interruptions, made over charge of the settlement to Babu Barhamdeo Narain, Assistant Settlement Officer.

The total area surveyed was 447,662 acres, or 669 square miles. Of this area, 7,654 contained in 11 villages in the Haveli pargana, Purnea, were found not to fall within the terms of the Government notification directing the survey under Chapter X of the Tenancy Act, as the Srinagar Court of Wards' estate held only a small share in them. Thus, though the villages were cadastrally surveyed, they were not taken up for settlement. The total area of the lands settled is therefore 440,008 acres. The estates are distributed in five districts and 23 parganas, as follows:—

	A.	R.	P.
Bhāgalpur	157,249	2	34
Monghyr	126,590	3	6
Purnea	128,518	3	33
Darbhangā	1,351	2	16
Malda	26,297	2	27
Total	440,008	2	26

The survey of this estate was completed in June 1890, the total area being 282,240 acres, or 441 square miles, of which 104,320 acres are jungle surveyed on the 4" scale. The remaining area, 177,920 acres, is comprised in 632 villages. Up to the close of the year the papers of 594 out of 632 villages were made over to the Settlement Officer; the rest were pending on account of boundary disputes concerning them which were disposed of during the year, and the correct boundaries communicated to the Survey Office. Traverse survey stations and trijunctions were marked with specially dressed stones, the size and shape of the stones being different for stations and trijunctions.

III.—PRIVATE ESTATES.

There were altogether 52 applications for survey and record of rights under Chapter X of the Bengal Tenancy Act, against 30 in the previous year. Of these, 22 related to Government estates and 30 to private estates. Of the private estates which came under settlement during the year under report, an account of the operations in those which are important will be found under the head "Settlements."

Survey work was commenced by a detachment of a Professional Survey Party in the Muzaffarpur district in December 1891. Traversing of 743 square miles was done during the year.

Settlements.

1.—TEMPORARILY-SETTLED AND GOVERNMENT ESTATES.

In Orissa the number of plots finally attested by the Assistant Settlement Officers down to the end of the year was 423,713, covering an area of 198,706 acres. The cost of settlement was Rs. 1,36,407 during the year under report. Soil maps were prepared for 619 villages up to the end of March 1892.

The work remaining to be done in Angul, at the beginning of the year under report, was to make fair copies of the khasras and khatians, and to take kabuliyats from the sarbaráhkárs. The final report on the settlement has received the confirmation of Government. The area assessed in this estate is 140,992 acres, with an eventual rental of Rs. 90,934, against 55,471 acres, with a rental of Rs. 45,936 (including Rs. 8,820 on account of jungleburi and other tenures subsequently assessed), at the last settlement. The settlement runs for fifteen years from 1892. The rental for the first five years will be Rs. 72,934, and for the second five years Rs. 86,434. The collection of rent will be made through sarbaráhkárs, who will be paid by a percentage on the collections. The records will be maintained by the sarbaráhkárs, on the system recently laid down for the Khurda estate in Puri.

Since January 1891 the work of preparing records for attestation has been wholly under the direct supervision of the Settlement Officer. In the Sadar subdivision during the year under report, records were prepared of 451 villages comprising an area of 470.2 square miles, with 850,793 khasra numbers.

The work of khanapuri was under the direct supervision of Mr. Slack. During the latter part of the year he had the assistance in this work of three kánungos. Up to the 31st March 1892 the khanapuri of 1,614,038 khasra numbers had been completed. It is now estimated that the number of plots in the Sadar subdivision will exceed 20 lakhs. In all 119,822 khatians of raiyats and other tenants were attested during the year in the Sadar subdivision. Adding to this number 5,073 khatians attested in the previous year, the total number of khatians attested up to 1st April 1892 was 124,895. In the Sadar subdivision Mr. Allen was the only officer who settled fair rents during the half-year ending 31st March 1892, and the total amount of rentals fixed by him (on Government estates only) comes to Rs. 7,580, as against Rs. 7,576. In old thána Ramu the fair rents fixed so far amount to Rs. 85,456, as compared with a previous rental of Rs. 63,701.

Pending the preparation and consideration of soil maps, no assessment of land revenue was made either in the Sadar subdivision or in Ramu during the year, except the assessment of raiyats of the Government estates mentioned above. In Ramu, where attestation was finished in May 1891, the Assistant Settlement Officer was engaged in November in trying cases and preparing proposition statements for assessment. In the latter part of the year he was chiefly occupied in preparing soil maps and statements and in trying suits for settlement of fair rents. A scheme has been sanctioned by Government for strengthening and utilizing the khas tahsil establishment for the maintenance of the records. The settlement charges amounted to Rs. 1,02,339 during the year under report, and the total expenditure under this head from the beginning has been (including old thána Ramu) Rs. 1,57,759.

In Jalpaiguri, the record of rights was completed for 2,742 jots and 249 khas blocks during the year under report (including records for 1,550 jots during the last half of the year), and the rents of 17,347 tenants in Maynaguri tahsil were recorded

(including those of 8,795 recorded in the last part of the year). The rental of the 17,347 tenants has been raised by the Settlement Officer from Rs. 76,984 at the former settlement to Rs. 1,40,300; but the figures are open to some doubt, and many objections against the assessment are pending before the Commissioner to be disposed of under Article XI of the rules appended to the Bhutan Duars Act of 1869. The new settlement rates have not yet been brought into effect, partly because of the backwardness of the settlement work, and partly because of the partial failure of the paddy crop of the winter of 1891. The Board have recently submitted a report to Government on the question of the form of kabuliyats, and the realisation of rent in the Duars. The cost incurred on settlement during the year was Rs. 30,455, giving a total of Rs. 76,757 since the beginning of the operations down to 31st March 1892.

In Backorgunge during the year under report there were twenty-two char estates under settlement under the Tenancy Act—
 Government estates in Backergunge. eighteen under Mr. Dvija Das Datta, three under Babu Pyari Mohan Basu, and one under the Sub-divisional Officer of Bhola.

Attestation, including record of rents and determination of status, was done in respect of four of these estates. Objections under section 105 were disposed of in six. Fair rents under section 104 were fixed for eight. Draft records were published of eleven. Disputes under section 106 were settled in nine. Records were finally published in ten. Raiyats for patit lands were found and settled in four.

During the year the attestation, including record of rent and rights and determination of status, was made in regard to 7,123 tenants. Fair rents were fixed for 7,551 tenants. The number of objections disposed of under section 105 was 1,845, and that of disputes under section 106 was 152.

The estates under settlement on the file of Babu Pyari Mohan Basu were—

- (1) Char Shambhupura, No. 5225,
- (2) „ Golokpura, No. 5226,
- (3) „ Padma, No. 5234,

comprising a total area of 6,520 acres. The records of Shambhupura and Golokpura were finally framed and published during the year under report and final reports submitted. These two estates have been under settlement for the past eleven years. Various attempts to settle them under the Regulations and Act VIII (B.C.) of 1879 failed on account of legal objections raised by the houladars. Finally, proceedings under Chapter X of the Tenancy Act were taken, and a settlement concluded which has resulted in an increase of Rs. 647 and Rs. 426 on previous net revenues of Rs. 3,107 and Rs. 2,722. The estates have been settled with farmers for 12 years. The cost of survey (non-professional) of these estates was 3 annas and 11 pies per acre; the cost of settlement has not been distinguished from expenditure on other estates. The settlement of char Kalachand with an area of 1,062 acres under the Tenancy Act had been pending on the file of the Subdivisional Officer of Bhola since March 1888. The survey was completed and tested in 1889. Disputes which were contested before the Special Judge were settled, and the records were finally published in the year under report. The rent according to the previous settlement was Rs. 235 and according to the new settlement Rs. 603, the increase being due partly to increase in the area of cultivated land, and partly to enhanced rates. No objections against the enhancements have been preferred. The total cost of the survey and settlement of the char is shown as Rs. 257 only.

In Noakhali there were three Government estates under survey and settlement under the Tenancy Act, namely—(1) char Peer Bux, (2) char Gazi, and (3) char Fakira. The survey of (1) char Peer Bux, which has 136 tenants and an area of 5,176 acres, cost Rs. 478 and the settlement Rs. 175, giving a rate of 2 annas an acre in all. An increase of Rs. 551 has been obtained on a previous revenue of Rs. 2,594. The settlement of (2) char Gazi was originally taken up under the Regulations, but in July 1891 the preparation of a record of rights was ordered under the Tenancy Act. This estate contains an area of 7,255 acres, of which 4,410 acres were measured up to March 1891 and 2,845 acres during the year under report. The local explanation of the khatians began in

February 1892, and the record of rights and settlement of rents in April 1892. The survey alone has cost Rs. 1,540, the high rate being due to the smallness of the fields and to the variety of interests that had to be recorded. The settlement of (3) char Fakira was also at first taken up under the Regulations, but was brought under the Tenancy Act in July 1891. The area of this estate is 2,748 acres, of which 903 were surveyed in the previous year and 1,845 acres during the year under report. The local explanation of the khatians began in January 1892, and was in progress to the end of the year. The total cost of the survey was Rs. 179.

II.—WARDS' ESTATES.

This work in the Burdwan and Birbhum districts was in charge of
 Burdwan Raj khas mahals. Babu Sukumar Halder. In the Midnapore district,
 the settlement of Majnamutha was in charge of
 Mr. Dijen Lal Roy.

In the Birbhum district, the records of Hukmapur were finally published, and the work brought to a close at the end of October 1891. The work in Chandrihat and Panchberia was also completed. The settlement in Birbhum cost Rs. 18,767 (out of which Rs. 5,286 were expended during the year under report), or about Re. 1-2-6 per acre. The work in Burdwan commenced with the settlement of some petty scattered villages. Up to the end of March 1892 the Settlement Officer had completed a record of existing rights for 22 villages with an area of 10,816 acres, fair rents being determined in the case of 12 villages with an area of 3,379 acres. The Settlement Officer also enquired into and decided on the spot 1,044 disputes regarding right, title, &c. The records of 15 villages were made over to the Assistant Manager, Mr. Srinath Dutt, with a view to amicable settlement. The amicable settlement had resulted up to the end of March 1892 in an increase of Rs. 131, the tenants, as defendants, admitting excess areas and paying additional rent thereon at equitable rates. Out of 12 applications filed by the Raj under section 104 (2) for 11 villages, 8 had been disposed of and 4 were pending. No enhancement of rent had been decreed where the tenants had contested it, as the Raj had not been able to give any evidence in support of its claim. The khatians of six villages and the khewats of four were published under section 105 (1), and gave rise to no disputes under section 106. The settlement in Burdwan cost Rs. 2,136.

In Snjamutha the early part of the year was occupied in preparation of new rent-rolls instead of the rent-rolls of the previous year which had been rejected, and in disposing of objections and of corrections of records. In accordance with the landlord's request, the Survey Department was directed to note the tauzi numbers against the plot numbers on the khasras and mark them on the traces, after which the Settlement Officer was to enter them on the khatians. This work was completed by the Survey Department on the 22nd January 1892, but the corrections involved thereby occupied the Settlement Officer up to the end of the year under report. The area of the estate is 28,889 acres. The number of villages comprised in the estate is 60. The khatians of 38 out of the 60 villages were finally published during the year under report. During the year the settlement cost Rs. 9,179, the total expenditure being—survey Rs. 1,07,000 and settlement Rs. 19,458.

This estate has been noticed under the head "Survey." The cost for
 Talipabad ward's estate in settlement was Rs. 3,326. The tabsildars of the
 Dacca. estate are to be trained to keep up the records, as
 there are no putwáris on the estate.

Dakhin Shahláspur ward's es- The following settlement work was done in
 tate in Backergunge. this estate:—

- (a) Existing rents were recorded and status determined of tenants in 17 villages covering an area of 56.43 square miles.
- (b) Fair rents were fixed partly in all of these villages.
- (c) Draft records were published in five of these villages covering an area of 5.07 square miles.
- (d) Records were finally framed and published in six villages, including the two of which draft records were published in the previous year, covering an area of 3.98 square miles.

- (e) Collector's copy of the fair copy of the records was completed with respect to three villages, and partly prepared with regard to two other villages.

The number of tenants whose rents were recorded and status determined were:—

Up to 31st March 1891	...	...	...	1,032
During the year	...	...	...	19,533
		Total	...	<u>20,565</u>

The number of tenants for whom fair rents had been recorded were:—

Up to 31st March 1891	...	...	...	102
During the year	...	...	...	5,563
		Total	...	<u>5,665</u>

the total rentals being according to —

				Rs.
Present rent	...	...	...	28,765
Fair rent	...	...	...	29,626

The number of cases of all kinds decided during the year was 775, and there were 528 cases pending at the end of the year.

The settlement has cost up to 31st March 1892 Rs. 12,736.

In this estate during the year rights were recorded and fair rents determined in 230 villages and 53,001 holdings. The total number of villages dealt with up to the end of the year was 259. The work was nearly completed. A large increase of rental will be obtained on account of excess land found in the possession of the raiyats. The total number of objections preferred under section 105 of the Tenancy Act was 1,714, of which 1,301 had been disposed of up to 31st March 1892. Most of the objections involve questions of right to hold rent-free. The draft khatians of 40 villages had been published up to the end of April 1892. No appeals had been preferred to the Special Judge. The total cost for settlement up to the 31st March 1892 was Rs. 18,007.

Serail.

In this estate the work to be done at the beginning of the year under report consisted of—

- (1) settlement of pargana Akbarabad in the Malda district, containing 29 villages with an area of 10,329 acres, or 17 square miles;
- (2) completion of the settlement of pargana Kotwali in Malda, containing 20 villages with an area of 2,040 acres, or 3½ square miles;
- (3) the resettlement of mauza Nowhatta, pargana Kubkhand, with an area of 5,180 acres;
- (4) rewriting of the records of two villages, Bungaon and Chainpur, pargana Uttarkhand, with an area of 8,324 acres and 19,169 khasra numbers in consequence of presentation at the time of final publication of the records of 1,600 petitions of compromise for transfers of fields from one purcha to another.
- (5) preparation of the records for deposit in the Collectorate;
- (6) preparation of the village statement showing average size of the holdings of various classes of tenants for five parganas containing 150 villages of the Malda district, and the preparation of the statistical statements 20A to 20F for the two parganas of the same district;
- (7) the fixing of boundary pillars along the disputed boundaries in 103 villages of the districts of Bhágapur, Monghyr, Purnea, and Malda, according to the terms of the decision arrived at;
- (8) preparation of traces for correction of the maps according to the orders passed in course of settlement, and disposal of boundary dispute cases;
- (9) adjustment of accounts with the Accountant-General for the whole period of operation.

These were all completed by Babu Burhamdeo Narain after he had received charge from Mr. Collin.

The total area of the lands settled is 440,008 acres. The total cost of the survey and settlement operation has been:—

	Rs.
(a) Survey (professional)	1,20,528
(b) Settlement and non-professional survey	1,85,203
Total ...	3,05,731

or after making deductions for stamps, copying fees, etc., Rs. 3,00,409, against a total estimate of Rs. 2,50,000. The net increase of rent is Rs. 23,637, equal to 7·8 per cent. on the total outlay.

This estate appertains to the Burdwan Raj and contains an area of 146,804 acres. During the year under review the record of rights was completed in 147 villages, and rents recorded and status determined of 21,312 raiyats. The proceedings have resulted in an increase of Rs. 18,494 in the rental.

In this estate during the year under report Mr. Datta, who was Settlement Officer from 1st April to 14th May, completed the record of rights in 22 villages, and recorded the rents and status of 1,219 tenants, resulting in an increase of Rs. 4,530 in the rental. The Manager, Mr. Sakhawat Hossein, who was appointed Settlement Officer in addition to his duties, did the following work during the remainder of the year under report:—Rights and status determined and final terij prepared of 12,488 tenants and 2,237 under-tenants and mortgagees; rent-free and other permanent tenures identified with old papers and excess lands resumed of 998 tenants; 15,161 acres of Raj surkar lands classified; 877 acres surveyed of lands which were cultivated since survey was completed; and 70 miles of exterior boundary settled.

III.—PRIVATE ESTATES UNDER SETTLEMENT UNDER THE TENANCY ACT.

This is a permanently-settled estate, and is owned by Mohant Gopal Das as patnidar under the Maharaja of Burdwan. It comprises an area of 23,530 acres in 45 villages. The survey and settlement of this estate was ordered by Government under section 101 (2)(b) of the Tenancy Act on account of protracted disputes between the Mohant and his raiyats. The survey was brought to a close during the first half of the year under report. There were 34 boundary disputes, all of which were disposed of. Of 1,076 objections made relating to occupancy of land, all have been disposed of except four, which were pending at the end of the year. Of 136 applications for the settlement of fair rents, 89 were disposed of during the year, as also 55 out of 92 suits under section 106. Fair rents are being settled according to law and not according to the terms of the compromise as originally proposed. The following is the result of fair rent suits disposed of up to 31st March 1892:—

Number of raiyats whose fair rents have been settled	...	1,513
		Rs.
Total assessment of existing rent	...	22,689
Total amount of fair rent settled	...	23,576
Increase in rent	...	887

The increase of rent is due to the finding of excess land on measurement. The draft records of eight villages were published up to 31st March 1892, and those of the remaining villages are being published. The cost of settlement during the year was Rs. 7,169. The total cost has been for survey Rs. 7,125 and for settlement Rs. 9,360, and it is estimated by the Settlement Officer that about Rs. 1,300 more will cover the cost up to completion.

This estate, which is 504 acres in area, came under settlement on an order passed by the Commissioner under section 103 of the Tenancy Act in July 1890 on the application of the proprietors; who stated that the raiyats would not pay rents according to the existing papers. It was measured in

March and April 1891, and the records were finally published on the 25th January 1892. The raiyats appealed to the Special Judge against the rates of rent and the measurements, which were alleged to be incorrect. The appeal regarding the rates of rent has been remanded for detailed enquiry, and the appeal regarding the measurements is pending before the Judge. The survey and settlement cost respectively Rs. 52 and Rs. 126, or at the rate of 4 annas 10 pies to the acre. The proceedings resulted in a decrease of Rs. 92-12 on the previous rental of Rs. 2,551-4-11.

A survey and settlement of this mahál was ordered by Government under section 101, sub-section 2 (b) of the Tenancy Act in May 1890 on the application of the raiyats and on the reports submitted by the local officers showing that serious disputes had for years existed between the tenants and landlords. This mahál contains 8 villages, with an area of 4,105 acres. The measurements were completed in April 1891, and the draft records finally published in March 1892. Appeals have been preferred to the Special Judge in respect of the rates of rent, and are pending. The whole cost of survey and settlement has been Rs. 595-14 and Rs. 652-7, or at the rate of 4 annas 9 pies to the acre. A decrease of Rs. 1,519-9-5 in the previous rental of Rs. 12,686-8-6, as stated by the zamindars, has been the result of the proceedings.

The settlement of this estate was sanctioned by the Commissioner under section 103 of the Tenancy Act in March 1890 on the application of the proprietors, who represented that there was confusion in the records, and that the raiyats would not pay their rents. The estate has an area of 1,884 acres in five villages. The survey was completed in July 1891. A dispute regarding the local measuring pole was decided by the Settlement Officer in August; but the proprietors having appealed to the Special Judge against this decision, settlement work in three out of the five villages was held in abeyance. This question was finally remanded by the Judge for a judicial decision. In the meantime work progressed in the other two villages with an area of 1,120 acres, and the final records were published in February 1892. The total expenditure incurred in this settlement up to date is Rs. 450-12-10 for survey and Rs. 333-4 for settlement, or at the rate of 6 annas 8 pies an acre, but the proceedings are not yet completed.

A survey and the preparation of a record of rights was sanctioned under section 101, sub-section 2 (a), owing to the existence of serious disputes between the Rajah of Dubalhati and his tenants regarding the rent and area of holdings. The necessary notification was published in the *Calcutta Gazette* of the 20th December 1887, but 17 villages were subsequently added to the list under separate notifications, dated, respectively, the 25th July, 25th September, and 16th October 1889.

The survey by plane-table was commenced in March 1888 and ended in March 1890. The settlement was begun in November 1889 and was finished in August 1891.

The survey operations extended over a tract containing a total area of 41,794 acres, of which 4,136 were subsequently excluded from the survey. The area that came under settlement was 37,758 acres, classified thus:—

<i>Cultivated soil.</i>				Acres.
Rice land	...	...	...	23,403
Up land	...	...	...	5,341
Total cultivated			...	28,744
New fallow	...	...	...	563
Old "	...	...	...	1,919
Other kinds	...	...	...	1,777
Unculturable	...	...	...	4,755
Total			...	9,014
GRAND TOTAL			...	37,758

Class of cultivator.			Acres.
1.	In possession of the proprietors	...	6,311
2.	Tenure-holders	...	492
<i>Raiyats holding under proprietors.</i>			
3.	Raiyats at fixed rates	...	...
4.	Settled raiyats	...	24,142
5.	Occupancy	...	...
6.	Non-occupancy	...	608
Total			31,553
7.	Rent-free holders	...	6,205
GRAND TOTAL			37,758
8.	Under-raiyats	...	2,204

The average area of holdings is as follows:—

	Acres.
Tenure-holders	55
Settled raiyats	3
Non-occupancy raiyats	1

The total number of objections filed under section 106 was 2,073, of which 192 were disposed of during, and the balance before the commencement of, the year. The total number of applications for settlement of rent under section 104, clause (2), was 162, of which 73 were disposed of during the year under report. The total number of tenants in the estate is 8,497, and the amount of fair rent settled is Rs. 86,295. Of this the fair rent of 3,797 tenants, amounting to Rs. 38,547, was settled during the year.

The settlement has resulted in an increase of rental amounting to Rs. 18,167, the new rental being Rs. 86,295 and the old Rs. 68,128, while the Government revenue is only Rs. 21,602.

	Rs.	A.	P.
Average rate per acre on cultivated rent-paying area	...	3	13 0
Average rate per acre on the rent-paying area cultivated and uncultivated	...	3	6 6

The total expenditure has been Rs. 37,449-3-4, of which Rs. 5,223-11-6 was incurred during the year ending 30th September 1891. Deducting Rs. 5,025-10-0 realised on account of process fees, &c., the net cost stands at Rs. 32,423-9-4, or annas 13-8 $\frac{1}{2}$ per acre. Of this amount Rs. 18,921-12-8 falls to the share of the Rajah, and Rs. 13,501-12-8 to that of the tenants (inclusive of holders of rent-free lands).

In Dacca five petty private estates were under survey and settlement under the Tenancy Act during the year under report, comprising an area of 4,642 acres in 32 villages. Of this area, 1,348 acres had been measured up to the end of March 1891, and 2,806 acres more were measured up to the end of March 1892. In one estate* the records have been finally published; and in another† the draft records have been published. The measurement of another‡ estate has been completed and tested, and the measurement of the remaining two§ is in progress. The work is being done by the district staff. The total cost of the completed proceedings in the case of estate taraf Barkanda, which has an area of 693 acres only, is shown as Rs. 667-2-8 for survey and Rs. 398-8-9 for settlement, or over Re. 1-8 per acre.

The settlement of Paboi, which has an area of 1,294 acres only, has been pending since 1886. It was undertaken on the petition of the zamindar. The records were finally published in 1889, and a final report was submitted to the Collector by the

Petty private estates in Dacca.

* Taraf Barkanda, No. 546.

† Brindaban Chandra Radha Kishore Sen.

‡ Raj Narain Sen.

§ Estate No. 107, pargana Narailuhpur.

Estate No. 1686, taluk Rambalab Roy.

Estate Paboi in Mymensingh.

Subdivisional Officer of Netrakona in that year, but it was found to contain mistakes, in the correction of which nearly three years were spent. The raiyats ultimately refused to take copies of the khatians. The new rental fixed was Rs. 3,378-7-4, against a former rental of Rs. 1,800 as stated by the zamindars, and some of the raiyats are still contesting the enhancements in the High Court.

The settlement of Sonai, which has an area of 2,002 acres, has been pending from 1887. It also was undertaken on the petition of the zamindars. The final records were published in March 1890; but it is stated that neither zamindars nor tenants have taken copies of the *khatians*. It appears that the Settlement Officer accepted "lump jamas" for each holding as stated by the tenants, and fixed the whole rental at Rs. 1,211-13-9. In the case of this estate appeals against the settlement are still pending before the Special Judge and the High Court.

The survey and settlement of 18 private estates (permanently settled) in this district, which began in the cold weather of 1888-89, were practically completed within the year ending 31st March 1892. The total area of these estates is 443,756 acres, or about 693 square miles, and they include 1,432 villages. Of this area, 204,658 acres are cultivated. By the 31st March 1891 the whole area had been measured. In April 1891 rules for fixing rents were drawn up, and instructions were issued to the Settlement Officer by Government. During the recess of 1891 the khasras of the last season's work were checked, calculations of rent were revised, and fair khatians were written out. In August the work of explaining the khatians to the villagers began. Down to the end of September draft khatians for 574 villages had been published. This work was completed by December 1891.

The final publication of the records was completed by 15th February 1892. The interchange of pattas and kabuliyats was the principal work remaining to be done at the end of the year. On the 15th July the Deputy Commissioner reported that pattas had been issued and kabuliyats executed in all but 177 villages in tuppah Barkope, where the headmen, at the instigation of the four-anna sharer of the estate, refused the pattas offered to them. This sharer has, however, recently withdrawn his opposition to the settlement, and it is expected that there will now be no difficulty in getting the village headmen to take the pattas and to execute kabuliyats.

The whole cost of the survey and settlement down to the end of March 1892 has been Rs. 1,45,572, or a little more than 5 annas an acre for the whole area. Of this sum Rs. 45,118 were spent in the year ending 31st March 1892.

The following statement shows the financial results of the petty settlement operations conducted by the ordinary district staff during the year, in comparison with the year

Petty settlements.
1890-91:—

YEAR.	ORIGINAL SETTLEMENTS.		RESETTLEMENTS.				SUMMARY SETTLEMENTS.				SETTLEMENTS FOR DISPOSAL.	
	No.	Net revenue.	No.	Net revenue.	Increase.	Decrease.	No.	Net revenue.	Increase.	Decrease.	No.	Estimated revenue.
		Rs.		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.		Rs.
1890-91 ...	130	10,689	264	1,70,180	36,391	3,360	141	96,496	5,100	400	1,323	5,67,067
1891-92 ...	74	13,397	690	1,76,716	29,443	12,196	101	86,799	5,415	1,054	1,428	6,15,390

There were concluded in all 791 settlements, but none of them call for special mention. Of the 1,428 pending cases, the greatest number was in the districts of the Dacca Division and in Jalpaiguri and Muzaffarpur. In the Dacca Division almost all the settlements refer to char lands in the great rivers. Most of the cases pending in Jalpaiguri relate to waste land jots and tea grants.

Statement showing the important *Temporarily-Settled estates and Government*

N.B.—Small settlements under the old Regulations

Division.	District.	Name of estate.	Total number of villages under survey and settlement.	Estimated area in square miles and acres.	Whether surveyed by professional or non-professional agency.	AREA SURVEYED (CATASTRALLY) IN SQUARE MILES AND ACRES—			NUMBER OF VILLAGES OF WHICH THE RECORDS HAVE BEEN HANDED OVER BY THE SURVEY TO THE SETTLEMENT OFFICER—	
						Up to 31st March 1871.	During the year under report.	Total area surveyed.	Up to 31st March 1891.	During the year under report.
1	2	3	4	5	6	7	8	9	10	11
Orissa	Cuttack	The whole of the temporarily-settled estates, excluding Khurda and Bunkil.	2,237	2,229 sq. miles or 1,452,560 acres including revision area.	Professional.	610 sq. miles or 407,010 acres.	1,270 sq. miles or 818,640 acres.	1,012 sq. miles or 1,223,580 acres.	660	1,137
	Balasore			sq. miles or 653,148 acres. 1,882 sq. miles or 1,250,492 acres.						
Chittagong	Chittagong	Sadar subdivision	933	1,500 sq. miles or 1,023,410 acres.	Ditto	610 sq. miles or 396,253 acres.	640 sq. miles or 313,600 acres plus 202 sq. miles or 129,280 acres of topography.	1,050 sq. miles or 671,983 acres plus 202 sq. miles or 129,280 acres.	79	377
		and								
		Thana Chakira, Teknaf, and the islands of Maskhin and Kutubdin	97	680 sq. miles or 418,060 acres.	Ditto	—	8 sq. miles or 5,143 acres.	0 sq. miles or 3,843 acres.	—	—
		Old Thana Rana	50	245.9 sq. miles or 157,401 acres.	Ditto	245.9 sq. miles or 157,401 acres.	—	245.9 sq. miles or 157,401 acres.	50	—
Bengal	Jalpaiguri	Western Duars	9,001 poks.	771.49 sq. miles or 503,733 acres.	Ditto	704.72 sq. miles or 452,500 sq. acres.	66.77 sq. miles or 41,152.50 acres.	771.49 sq. miles or 503,733.40 acres.	4,303	5,208
Burdwan	Midnapore	Bhatia	29	6,608	Non-professional	6,608 acres.	—	6,608 acres.	23	—
Presidency	Sadia	Khamarhat	13	125	Ditto	63 acres.	158 acres.	211 acres.	—	8
Dacca	Dacca	Jamir Jayramnagar	10	1,190	Ditto	1,190 acres.	—	1,190 acres.	10	—
	Backergunge	24 clear estates	24	62,063	Ditto and partly professional.	60,801 acres.	9,409 acres.	60,700 acres.	17	7
Rangoon	Tippura	Maisurdi and 12 others.	65	3,354	Non-professional	651 acres.	11,808 acres.	12,549 acres.	5	60
	Naukhali	Chow Dear Bar	1	5,170	Ditto	5,170 acres.	—	5,170 acres.	1	—
		„ Gari	1	7,255	Ditto	4,410 acres.	2,845 acres.	7,255 acres.	—	1
		„ Fakira	1	2,748	Ditto	503 acres.	1,615 acres.	2,748 acres.	—	1
		Total	12,054	5,340,368 acres or 8,331 sq. miles.		1,412,651 acres or 2,318 sq. miles.	1,283,761 acres or 1,968 sq. miles + 129,280 acres or 202 sq. miles of topographical survey.	2,846,792 acres or 4,128 sq. miles plus 129,280 acres or 202 sq. miles of topographical survey.	5,043	4,289

estates under Survey and Settlement during the year ending 31st March 1892.

are not included in this statement.

TOTAL COST—						RATE PER ACRE		INCREASE OF REVENUE—		REMARKS
Up to 31st March 1891.		During year under report.		Total.		Survey.	Settlement.	Actually obtained.	Expected.	
Survey.	Settlement.	Survey.	Settlement.	Survey.	Settlement.					
12	13	14	15	16	17	18	19	20	21	22
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. A. C.	Rs. A. C.	Rs.	Rs.	
1,25,477	...	2,01,800	1,36,407	3,32,943	1,36,407	...	...	...	...	An increase of about Rs. 8,00,000 is expected in the revenue.
1,55,324	43,445	1,55,850	92,735	3,11,174	1,35,150	0 6 2	...	...	1,30,000	
...	...	3,017	...	3,017	...	...	...	...	15,000	
67,706	11,075	...	9,604	67,706	21,679	0 6 11	0 2 2	4,629	35,000	
3,02,060	40,302	51,710	80,455	3,54,408	76,757	...	...	63,516	...	* Of this sum traversing cost ... Rs. 82,152 Cadastral survey cost ... 2,94,256 Total ... 3,54,408
1,925	1,504	...	...	1,925	1,504	0 4 2	0 3 7	1,198	...	
64	...	141	...	305	...	0 15 6	...	...	34	
221	181	...	30	221	191	0 2 9	0 1 7	...	1,105	
29,453	7,700	...	9,297	29,453	19,097	...	...	12,546	{ 52,000 or 32,806	
139	...	2,146	491	2,325	491	0 3 0	0 0 3	693	1,362	
473	118	...	59	473	175	0 1 4	0 0 5	551	...	
1,132	...	408	193	1,540	193	0 3 3	0 0 4	...	1,030	
179	...	...	60	179	80	0 1 0	0 0 3	...	...
6,34,917	1,11,208	4,44,161	2,78,881	11,34,165	2,50,531	...	...	62,692	2,65,242 or 2,04,088	

Statement showing the Wards' Estates under Survey and

These settlements are under the Tenancy Act of 1885

Division.	District.	Name of estate.	Total number of villages under survey and settlement.	Revised area in square miles and acres.	Whether surveyed by professional or non-professional agency.	AREA SURVEYED (CADASTRALLY) IN SQUARE MILES AND ACRES—			NUMBER OF VILLAGES OF WHICH THE RECORDS HAVE BEEN HANDLED OVER BY THE SURVEY TO THE SETTLEMENT OFFICER—	
						Up to 31st March 1891.	During the year under report.	Total area surveyed.	Up to 31st March 1891.	During the year under report.
1	2	3	4	5	6	7	8	9	10	11
Burdwan	Burdwan (sanctioned estates Bankura (nos. 1, 2, and 3) Bardham (Bakurpur, Dandabera, and Chaudhulali, Midnapore (Jangmalia), Hooghly ...	Burdwan Raj khos mohals...	310 & unknown	286,041 acres for cadastral survey, 416,000 acres for revenue.	Professional ...	380 sq. miles or 245,272 acres.	6,376 acres cadastral plus 265 sq. miles of traverse.	300 sq. miles or 249,648 acres.	62	...
Presidency	Nadia	Palipatad ...	113	60,100 acres or 94 sq. miles.	Non-professional	...	3,796 acres.	2,708 acres.	...	9
Dacca	Dacca	Dak bin Shahbdagpur ...	57	86,371 acres or 135 sq. miles.	Partly professional and partly non-professional.	79,718 acres.	164 acres.	79,882 acres.	10	28
Chittagong	Tippura	Satvil ...	291	180,661 acres or 282 sq. miles.	Professional ...	180,664 acres or 282 sq. miles.	...	180,664 acres or 282 sq. miles.	218	23
Bidarpur	Bidarpur (Nagarpur, Purnea, Malda ...	Srinagar Purnia ...	680	447,662 acres or 699 sq. miles.	Ditto and non-professional at 81 sq. miles.	447,662 acres.	...	447,662 acres.	620	...
Orissa	Orissa	Kujang ...	461	145,850 acres or 229 sq. miles.	Professional ...	145,850 acres or 229 sq. miles.	...	145,850 acres or 229 sq. miles.	461	...
		Kanika ...	682	282,340 acres or 441 sq. miles.	Ditto	177,920 acres or 278 sq. miles.	...	177,920 acres or 278 sq. miles.	517	17
Total			2,382	1,440,505 acres or 2,308 sq. miles.	...	1,270,002 acres or 1,994 sq. miles.	10,036 acres or 16 sq. miles.	1,280,138 acres or 2,010 sq. miles.	2,102	137

Statement showing the Private Estates under Survey and Settlement under

N.B.—Some settlements of small estates sanctioned by Commissioners of

Division.	District.	Name of estate.	No. of villages.	Acres.	Whether surveyed by professional or non-professional agency.	Acres.	Acres.	Acres.	No. of villages.	No. of villages.
Burdwan	Burdwan	Lat Syanda-pur ...	1	31	Non professional...	...	22	82	...	1
		Wallaipur ...	45	23,321	Ditto ...	23,321	...	23,321	45	1
		Kodari ...	41	5,120	Ditto ...	5,120	...	5,120	41	...
		Chaugan Chak ...	1	504	Ditto ...	504	...	504	...	1
		Nasik Mohal ...	8	4,106	Ditto ...	2,401	1,506	4,106	...	8
	Midnapore	Srikanta Kalayanda ...	1	158	Ditto ...	...	158	158	...	1
		Nagari ...	5	1,884	Ditto ...	...	1,884	1,884	...	5
		Bengalain ...	1	322	Ditto ...	...	322	322	...	1
		Skalarita ...	0	822	Ditto ...	822	...	822	...	0
Rajshahi	Rajshahi	Dakulhati ...	271	41,794	Ditto ...	41,794	...	41,794	196	...
Dacca	Dacca	Five petty estates ...	39	4,542	Ditto ...	1,648	2,893	4,542	7	...
	Mymaningh	Seven ditto ...	10	5,308	Ditto ...	4,257	814	5,171	...	1
Chittagong	Tippura	Alakia Durgapur ...	7	1,284	Ditto ...	1,284	...	1,284	7	...
Bidarpur	Scotchal Pargana	Scotchal Pargana ...	1,432	463,432	Ditto ...	463,432	...	463,432	...	...
Total			1,801	562,307 or 864 sq. miles.	...	644,795 or 861 sq. miles.	7,947 or 12 sq. miles.	652,432 or 863 sq. miles.	300	19

Note.—The totals in columns 12 to 17 are exclusive of the figures given here for the Scotchal Pargana; and the Midnapore.

in record of rights and settlement of rents during the year ending 31st March 1892.

NUMBER OF RAIYATS WHOSE RENT HAD BEEN RECORDED AND STATUS DETERMINED—			TOTAL RENTAL OF TENANTS WHOSE RENTS HAVE BEEN SETTLED—				REMARKS.
Up to 31st March 1891.	During the year under report.	Total of columns 8 and 9.	According to new settlement.	According to previous panchanandi.	Increase.	Decrease.	
8	9	10	11	12	13	14	15
...	91,637	91,437	Rs.	Rs.	Rs.	Rs.	
2,500	71,990	74,790	7,590	7,576	4	...	
11,582	3,364	15,440	85,456	63,701	21,755	...	
...	17,347	17,347	1,40,300	76,694	63,610	...	
793	...	706	2,509	1,671	1,198	...	
394	386	386	1,613	512	1,106	...	
4,354	...	4,264	43,904	43,062	5,922	...	
612	...	612	9,872	9,297	575	...	
68	...	68	2,000	314	1,186	...	
65	10	81	2,998	456	2,537	...	
...	18	18	340	101	289	...	
215	...	215	5,350	954	4,402	...	
130	...	130	2,762	1,456	1,296	...	
74	...	74	5,064	634	5,330	...	
...	1,408	1,468	7,200	5,997	1,463	...	
...	1,266	1,266	14,406	10,714	3,692	...	
...	1,045	1,045	32,208	11,342	20,954	...	
...	3,153	3,153	14,913	11,712	2,301	...	
...	140	140	540	200	640	...	
...	17	17	195	64	131	...	
...	
...	
...	
...	
534	...	534	11,514	8,408	3,106	...	
505	...	505	12,164	9,166	2,998	...	
346	...	346	11,894	9,507	2,377	...	
80	...	80	600	236	453	...	
34	...	36	708	303	375	...	
50	...	96	2,044	1,640	235	...	
82	1,306	2,040	5,230	3,506	1,724	...	
116	20	139	3,145	2,594	551	...	
...	
...	
22,797	194,343	217,140	4,33,606	2,89,695	1,50,091	...	

Increase of revenue—
Rs.
1,210 } expected.
476 }
504 } actually ob-
tained.
2,638 } expected.
191 }
1,719 } actually ob-
tained.
768 }
5,065 }
1,716 } expected.
3,774 }
13,500 }
2,516 }
440 } actually ob-
tained.
131 }
1,471 }
1,463 } actually ob-
tained.
1,116 }
453 }
375 } actually ob-
tained.
235 }
Total 45,438

and settlement of rents during the year ending 31st March 1892.

			Rs.	Rs.	Rs.	Rs.	
...	2,517	2,517	3,531	3,490	131	...	
...	
2,211	209	2,420	16,014	12,810	2,195	...	
3,914	8,238	12,162	82,781	86,105	...	3,324	
...	
...	73	73	...	...	...	...
1,032	19,633	20,665	29,825	28,705	861	...	
1,745	63,001	64,746	1,83,904	1,83,103	35,801	...	
60,960	...	60,960	3,57,181	3,33,544	23,637	...	
16,612	21,312	36,924	1,43,330	1,20,890	18,494	...	
...	
84,840	104,863	189,293	3,05,417	7,27,623	81,119	3,314	

* The total number of villages is 69 and not 66, as the latter included taluka areas wrongly measured as villages.

+ Eleven villages were omitted from settlement and not included here—vide remarks in annual report, Appendix B, for year ending September 1891.

Statement showing progress made in Private Estates in record of rights

Division.	District.	Name of estate	Total number of villages.	NUMBER OF VILLAGES IN WHICH RECORD OF RIGHTS HAS BEEN COMPLETED—		Total number of riyats in the villages in column 4.
				Up to 31st March 1891.	During the year under report.	
1	2	3	4	5	6	7
Burdwan ...	Bankura ...	Lat Syandaspur ...	1	...	...	98
		Kesari ...	41	41	...	2,463
		Chandera Chak ...	1	...	1	237
	Midnapore ...	Nimak Mahál ...	8	...	8	1,607
		Reikanta Kalaganda ...	1	...	1	76
		Muguri ...	5	...	2	268
		Baragalsia ...	1	...	1	117
		Belabaria ...	6	...	6	336
Rajshahi ...	Birbhum ...	Mollarpur ...	45	41	4	3,097
	Rajshahi ...	Darbhati ...	211	106	...	8,497
Dacca ...	Dacca ...	Five petty estates ...	32	7	...	509
	Mymensingh ...	Seven ditto ...	10	...	4	in 7 villages. 488
Chittagong ...	Tippah ...	Alukdia Dargapur ...	7	7	...	381
Bhagalpur ...	Santal Parganas ...	Eighteen estates ...	1,432	1,432	...	87,805 + 8,941 sub-riyats.
Total Private Estates ...			1,801	1,723	27	65,997

and settlement of rents during the year ending 31st March 1892.

NUMBER OF TENANTS WHOSE RENTS HAD BEEN RECORDED AND STATUS DETERMINED—			TOTAL RENTAL OF TENANTS WHOSE RENTS HAVE BEEN SETTLED—				REMARKS.
Up to 31st March 1891.	During the year under report.	Total of columns 8 and 9.	According to new settlement.	According to previous jamaabandi.	Increase.	Decrease.	
8	9	10	11	12	13	14	15
			Rs. A.	Rs. A.	Rs.	Rs. A.	
2,454	9	2,463	8,804 0	5,705 0	3,093	...	
...	220	227	2,408 0	2,341 0	...	93 0	
...	1,607	1,607	11,167 0	12,087 0	...	1,520 0	
...	78	78	705 0	793 0	2	...	
...	438	438	4,724 0	4,716 0	8	...	
...	117	117	1,095 9	1,085 15	...	9 6	
...	345	345	1,032 0	919 0	113	...	
3,006	801	3,807	24,576 0	22,889 0	1,687	...	
8,487	...	8,487	86,205 0	68,128 0	18,109	39 0	
416	94	509	1,202 0	1,054 0	148	...	
436	134	570	4,754 0	3,103 0	1,651	...	
361	...	361	4,295 0	3,196 0	1,099	...	
46,308	...	46,308	2,27,193 0	1,60,088 0	67,104	...	
81,474	3,988	85,462	3,77,640 9	2,87,843 15	91,842	1,845 6	

Government Estates.

The following table shows the results of collections in (1) Government estates leased to farmers, and (2) Government estates held direct, for the two years 1890-91 and 1891-92:—

YEARS.				Percentage of current collections on current demand.	Percentage of arrear collections on arrear demand.	Percentage of total collections on total demand.
(1) Government estates leased to farmers { 1890-91 1891-92				80.00 81.97	77.35 82.70	79.97 82.12
(2) Ditto held direct ... { 1890-91 1891-92				85.32 90.47	75.19 73.08	83.62 87.99

The standard of collections laid down by Government for (1) is 95 per cent., and for (2) 90 per cent. There was an improvement, as compared with the year 1890-91, in both these classes. In 14 districts the standard of 90 per cent. for current collections was reached under class (2). Excluding the Angul estate in Orissa, there were altogether 2,280 estates held direct by Government, of which 1,983 were Government estates, and 298 private estates managed by Government for various reasons.

The following statement shows the numbers of these estates, the demands, cost of management, and total collections during the year in the different divisions:—

DIVISIONS.	GOVERNMENT ESTATES.		PRIVATE ESTATES.		TOTAL.		Cost of management.	Percentage of cost on current demand.	Current collections.	Percentage of current collections on current demand.
	Number.	Current demand.	Number.	Current demand.	Number.	Current demand.				
1	2	3	4	5	6	7	8	9	10	11
		Rs.		Rs.		Rs.	Rs.		Rs.	
Burdwan ...	405	65,034	5	2,24,907	407	2,31,901	23,124	8	1,86,883	80.1
Presidency ...	211	3,29,235	54	13,473	265	3,12,720	14,471	4.6	3,08,249	98.5
Rajshahi ...	101	4,50,799	33	10,320	140	4,61,119	28,556	6.1	4,32,562	93.8
Dacca ...	561	3,73,872	116	1,22,405	677	4,96,277	37,064	7.5	4,59,212	92.1
Chittagong ...	287	6,04,724	20	15,650	307	6,20,374	60,319	10.4	5,60,055	91.7
Patna ...	103	2,13,510	47	34,298	204	2,47,808	20,348	8.2	1,87,460	75.6
Midnapore ...	123	2,70,917	6	12,204	129	2,83,121	25,631	9	2,57,490	91.4
Orissa ...	24	3,38,301	5	74,278	29	4,12,579	16,068	3.9	3,96,511	96.4
Chota Nagpur ...	180	74,083	1	17,738	181	91,821	2,595	2.8	89,226	97.9
Total ...	1,983	20,54,630	298	5,30,125	2,280	22,04,755	2,38,101	7.1	19,66,654	89.1

In the Rajshahi, Dacca, Chittagong, Orissa, and Chota Nagpur Divisions the percentage of current collections on the current demand exceeded 90 per cent., the recognised standard. The worst results in the whole Province were shown by the Burdwan Division, owing to the very bad collections in the Midnapore district.

In six districts the percentage of the cost of management on the current demand was over 10 per cent.

In Chittagong there are an enormous number of petty estates grouped together in five tahsils, each under a separate tahsildar, the current demand of the whole being nearly four lakhs of rupees. In Jalpaiguri there are five recorded estates, which include the three tahsildaris of the Duars with a great number of petty "jotes" which were under settlement, and in Darjeeling there are several large tracts of country managed by Government which are

shown as one estate. It must be borne in mind that the word "estates" when used in this connection has very different meanings in different districts.

Two distinct funds have been provided for the management, improvement, and protection of estates under the management of Government. These are—

I.—A fund of 12 per cent. deducted from the collections from the following classes of estates:—

- (a) Government estates of all descriptions, whether held khas or farmed.
- (b) Private estates managed direct by Government or let on farming lease.

Of the 12 per cent. set aside under the orders of the Government of India, 1 per cent. is devoted to purposes of education, $1\frac{1}{2}$ per cent. to communications, and 2 per cent. to exclusively sanitary improvements. The remaining $7\frac{1}{2}$ per cent. on the collections is intended for the management proper and miscellaneous improvements in the estates. The rule is that only works of improvement which will benefit the estates, but cannot be expected to yield a direct return to Government as proprietor, should be charged against this fund.

II.—A separate fund, known as the Agricultural Public Works Grant, of which the amount is sanctioned yearly by Government on the estimates of the local officers submitted through the Board of Revenue. This grant is intended for such works as irrigation, drainage, or embankments, necessary for the increase or maintenance of the land revenue from Government or temporarily-settled estates.

The total fund of 12 per cent. on the collections amounted to Rs. 69,624 in the case of temporarily-settled estates and Rs. 3,81,998 in the case of estates held direct by Government, or in all Rs. 4,51,622, from which had to be excluded the sums of Rs. 2,862 and Rs. 80 deducted in Tippera from the collection from estates settled for a period with the proprietor. This reduced the total 12 per cent. fund to Rs. 4,48,680, of which one-sixth, or Rs. 74,780, had to be devoted to strictly sanitary improvements. An expenditure of Rs. 99,529, however, was incurred in the different divisions chargeable to this grant, as shown below:—

DIVISION.	AMOUNT EXPENDED—					
	In digging tanks and sinking wells.	In drainage and irrigation.	In planting trees.	In drains and embankments.	In sundry works.	Total.
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Burdwan ...	1,684	...	...	1,004	1,322	4,010
Presidency ...	6,408	...	...	400	4,426	11,234
Rajshahi ...	731	...	112	...	8,287	9,130
Dacca ...	7,883	...	...	2,349	6,557	16,789
Chittagong ...	12,580	400	100	...	3,468	16,548
Patus ...	2,438	2,445	186	14,928	1,426	21,423
Bhāgalpur ...	816	...	...	...	1,000	1,816
Orissa ...	3,068	200	...	90	9,681	13,029
Chota Nāgpur ...	548	2,836	...	...	1,267	4,761
Total ...	36,936	5,961	398	18,771	37,444	99,529

In addition to the above sums Rs. 7,906 out of the Darjeeling Improvement Fund were expended on the clearance of jungle and drains, the improvement of markets, the planting of trees, and the maintenance of roads, dispensaries and primary schools in Darjeeling. In Jalpaiguri out of Rs. 4,998 sanctioned by Government from the Khedda Fund for sinking 21 wells, Rs. 3,496 were spent in sinking 15 Raniganj pipe wells experimentally. A sum of Rs. 30,000 expended on miscellaneous improvements in the Orphanganj market at Kidderpore in the 24-Parganas.

The amount placed by Government at the Board's disposal for the management and improvement grant proper (*i.e.*, the $7\frac{1}{2}$ per cent.) was Rs. 2,83,438, but something in excess of this amount was actually spent. The managers of the Government estates are required to draw up programmes of useful works, which should be sanctioned by the Collectors and Commissioners, and should be executed out of these Improvement Funds whenever money is available.

The $1\frac{1}{2}$ per cent. grant for communications is everywhere amalgamated with the General District Road Fund, and the Collectors are required to see generally that the Government estates receive a full degree of attention from the District Boards.

The Agricultural Public Works Grant placed during the year at the Board's disposal amounted to Rs. 88,000, but besides this a special grant of Rs. 13,068 was separately sanctioned for gilandazi work in the Gaya district. Out of the total grant of Rs. 1,01,068 thus made up, something over Rs 76,141 was spent.

In Noakhali the cultivation of wheat as an experiment was tried in three localities; it proved a failure in two of them, but is said to have been successful in the third. Buzar wheat was tried in Murshidabad, but the result was not satisfactory. Potatoes, wheat, linseed, and maize were distributed among the cultivators in the Duars, as also among the Sonthals of the new colony at Mahakulguri. Potatoes did well, but as the season was a dry one, the cultivation of wheat, &c., was unsuccessful. In Khulna potatoes, some English vegetables, and some improved varieties of sugarcane were grown in the jail garden. The cultivation of sugarcane was generally successful in the Nawadah subdivision. Hill potatoes were sown in two places in the Sasaram subdivision of Shahabad; in one place the outturn was very bad, owing to protracted drought, in the other it was moderately good. Bonemeal manure, which was given a trial in the district of Hooghly, proved a failure when applied to potatoes, while fair success was obtained in the case of sugarcane. At Arrah lucerne was cultivated with success.

The various descriptions of ploughs invented of late do not seem to succeed, proving either too heavy for country bullocks, or no better than the country ploughs. The only agricultural machine that has received general approval is the cane-crushing mill. In Shahabad Messrs. Burrows, Thomson, and Mylne of Bihia have introduced some important improvements in their double-squeeze sugarcane mills, which render them still more effective than before. An agricultural exhibition was held in Khulna, as in preceding years; some Sibpur ploughs, a butter-making machine, and other agricultural apparatus were exhibited, and the process of working them was explained by one of the Assistants to the Director of Land Records.

Primary schools are maintained on Government estates in most districts, the largest expenditure being reported from Darjeeling (Rs. 6,169), Chittagong (Rs. 4,888), Jalpaiguri (Rs. 2,835), the 24-Parganas (Rs. 2,407), Noakhali (Rs. 1,197), and Tippera (Rs. 1,183).

The usual grant of one and-a-half per cent. on the collections from Government estates was made over to the credit of the District Road Fund, for the benefit of communications lying within those estates. Expenditure on this account is reported from many districts, the largest being in Jalpaiguri (Rs. 59,913). Besides this sum, Rs 3,861 were expended from the Duars Improvement Fund for the construction of certain new roads in that district. In Darjeeling some important village roads were repaired at a cost of Rs. 5,482 from the District Road Fund and Rs. 2,015 from the Darjeeling Improvement Fund. Rupees 7,479 were expended by the District Board on the construction and repairs of roads in Tippera, Rs. 2,150 in Gaya, and Rs. 3,308 in Backergunge, in addition to a sum of Rs. 2,206 spent on the repairs of certain roads passing partly through Government and partly through private estates. The works executed in other districts call for no special mention. No expenditure was incurred by the District Boards of Jessore, Malda, and the 24-Parganas.

The tahsil registers and accounts were inspected, and raiyats' receipts tested in many districts, in some cases by Collectors, in some by Subdivisional Officers, and in others by

Deputy or Sub-Deputy Collectors in charge of khas maháls. The results of the inspections were in general satisfactory. The irregularities at Noakhali alluded to in the report for 1890-91 have been the subject of enquiry throughout the year, but the matter has not yet been disentangled. It has, however, been ascertained that the actual sum embezzled throughout the whole period was comparatively small. In Tippera there were a few instances in which the tahsildars did not properly maintain the jamabandi register, and effected transfers of names of raiyats and separation of accounts without proper authority. Some of the tenants in the Diamond Harbour subdivision of the 24-Parganas complained against a dismissed gumashta for not giving credit for sums paid by them on account of rent, although receipts were duly granted by him: the matter was under enquiry when the year closed.

There was no fluctuation in the material condition of the agricultural classes as a whole. Speaking generally, the past year

Condition of raiyats.

was one of deficient rainfall, but no Government estates are situated in the parts of districts which suffered the most, and no actual distress occurred in Government estates. Crops were everywhere below average, but the high prices realised for the surplus compensated to a large extent for the short crop.

Wards' and Attached Estates.

Revenue and rents due to Government and superior landlords. The number of wards' estates in charge of the Revenue authorities increased from 69 to 75, while that of attached estates decreased from 70 to 69, the net increase in all estates being therefore 5, and the number being 144 against 139. The arrear demand of revenue and cesses due to Government at the beginning of the year was Rs. 29,756, and the current demand Rs. 49,01,160, or altogether Rs. 49,30,916. Of this Rs. 25,053 arrear and Rs. 48,89,355 current (including Rs. 5,107 paid in advance in 1890-91) were paid and Rs. 3,680 remitted, leaving a balance of Rs. 12,828. The percentage of current payments on the current demand was 99·6. The balance due to Government at the close of the year, viz., Rs. 12,828, against Rs. 29,756 at the end of 1890-91, shows a satisfactory improvement.

Of rent and cesses due to superior landlords, the demands were—arrear Rs. 61,278, current Rs. 3,89,546, or in all Rs. 4,50,824. Of this, Rs. 4,01,237 were paid (Rs. 3,96,902 in 1891-92 and Rs. 4,335 in 1890-91) and Rs. 4,876 remitted, leaving a balance of Rs. 44,711, or Rs. 16,567 less than the balance at the end of 1890-91.

The following statement shows for the past five years the demands and collections of rent and cesses due to the wards' and attached estates under Government management:—

Year.	DEMAND.			COLLECTIONS.			PERCENTAGE OF—		Remissions.	Balance.
	Arrear.	Current.	Total.	Arrear.	Current.	Total.	Current collections on current demand.	Total collections on current demand.		
1	2	3	4	5	6	7	8	9	10	11
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			Rs.	Rs.
1891-92	71,67,017	91,63,100	1,63,30,117	30,62,305	41,68,458	91,30,763	60·3	69·8	72,12,179	65,69,202
1890-91	70,81,192	88,29,285	1,59,10,477	.....	.....	86,39,043	.....	58	7,57,403	74,24,535
1889-90	3,68,40,290	3,68,15,107	7,36,55,397	.....	.....	1,02,24,201	.....	100·2	24,32,188	61,84,049
1888-89	1,12,59,982	1,08,14,556	2,20,74,538	.....	.....	17,59,349	.....	84	10,70,426	1,04,42,809
1887-88	1,16,36,929	1,02,61,829	2,18,98,758	.....	.....	99,70,849	.....	27·6	2,16,927	1,16,90,815

N.B.—The reason why the closing balance of one year does not agree with the opening balance of the next is that the estates released are struck off from one year and estates newly taken in charge are brought on at the commencement of the next.

The decrease in the balance from Rs. 74,24,535 in 1890-91 to Rs. 65,69,202 in the past year, i.e., a decrease of Rs. 8,55,333, is satisfactory. On the other hand, the remissions have increased by Rs. 4,54,776, so that the real improvement in collection of arrears is only Rs. 4,00,557. The percentage of current collections on the current demand for 1891-92 is 66·2, while that of total collections on current demand is 99·8.

Of the Rs. 65,69,202 shown as balance at the end of 1891-92 in column 11 of the statement given above, Rs. 61,38,950 have accrued during the charge of the estates by Government. Of this sum about 48 lakhs are believed to be good and recoverable debts.

The balance of debts due by estates at the close of the year is shown at Rs. 37,05,508, as against Rs. 37,16,020 at the end of 1890-91, in spite of the accrual of debts to the extent of Rs. 14,24,325 ascertained and incurred during the year. The reduction in the balance is attributed chiefly to four lakhs of rupees repaid by the Deo estate in Gaya to the Maharaja of Darbhanga; but as the four lakhs were borrowed from Government for the purpose, it is presumed that they are included also in the Rs. 5,67,774 entered against the Patna Division as incurred during the year.

The total charges amounted to Rs. 10,23,634, against Rs. 8,91,547 in 1890-91. The increase was due to charges on survey and settlement, which, however, are debitable rather to improvements than to management. Owing to the same cause, the rate of total charges on the current demand for the Province rose from 9·0 to 11·1. The management charges proper, *i.e.*, pay, establishment, travelling allowance, &c., of managers, amounted to Rs. 7,23,054, as against Rs. 7,36,616 in the previous year, but owing to the decrease in the current demand the rate of these expenses on that demand rose slightly from 7·4 to 7·8 per cent.

The following statement shows the total sums spent on improvements of different kinds for the last five years:—

YEAR.	Subscriptions and donations to schools.	Subscriptions and donations to dispensaries.	Maintenance in efficient condition of estates, buildings, and other immovable property.	Improvement of land and property and benefit of ward.	Total.
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
1891-92	61,165	37,598	1,91,397	92,804	3,83,014
1890-91	59,211	32,265	2,13,178	58,404	3,63,078
1889-90	69,301	38,732	2,24,439	66,930	3,99,402
1888-89	63,707	38,110	1,24,638	68,167	2,70,882
1887-88	62,938	34,276	1,57,099	43,259	2,98,567

It is stated that in the Narlam estate estimates for Rs. 16,000 were sanctioned for the purpose just before the close of the year, but nothing was done during the year, the amount shown as spent on improvements in this estate, with a rent-roll of nearly two lakhs, being only Rs. 25. Similarly, the Dakhin Shahbázipur estate, with a rent-roll of Rs. 1,20,000, spent only Rs. 25 in improvements, Dhalbhum spent nothing, and Bhawánipur spent only Rs. 27,685, against Rs. 55,000 invested. The Manager of the Chandra Kumar estate in the Shahabad district invested Rs. 24,331 in Government securities and spent nothing on improvements. These are only some out of many cases where either nothing at all or else some insignificant sum has been devoted to improving the property of the estate.

The agricultural experiments carried on during the year in wards' and attached estates were not everywhere conducted with intelligence in the selection of new areas of demonstration and of suitable soils on which to introduce the trials.

Survey and settlement work was carried on in seven wards' estates under the supervision of the Director of Land Records and Agriculture, and operations on thirteen other estates.

The work, however, was not taken up on a sufficiently active and uniform scale.

The following statement shows the working of the certificate procedure in wards' and attached estates for the last five years:—

YEAR.	Number pending from last year.	Number filed during the year.	Total.	Disposed of during the year.	Pending more than six months.	Pending less than six months.	Total.	Amount of rent and cesses covered by certificates made in 1891-92 for the recovery of arrears due from estates.	Total annual rent and cesses of estates.	Percentage of column 10 on column 11.
1	2	3	4	5	6	7	8	9	10	11
								Rs.	Rs.	
1891-92	13,704	13,290	27,003	17,145	8,107	1,748	9,953	4,75,003	91,73,166	9·1
1890-91	41,107	16,375	57,482	18,038	12,193	1,511	13,764	4,60,050	98,29,364	4·6
1889-90	28,018	14,397	42,415	17,828	18,548	2,241	20,789	4,32,268	1,00,18,169	9·3
1888-89	10,170	14,192	24,362	12,880	8,151	1,617	23,018	3,68,097	1,08,44,356	10·3
1887-88	6,545	13,418	19,963	9,045	8,376	1,800	10,176	3,20,208	1,02,46,439	9·7

The fact that the disposals were well in excess of the number filed during the year is satisfactory; but the number pending over six months, though reduced from 12,193 in the year 1890-91 to 8,107, was still very large.

Of the estates having a rent-roll of Rs. 50,000 and upwards, the chief is the Burdwan Raj with a current demand of over 45½ lakhs of rupees, the Tikari and Dighapatiya estates with a demand of over 6 lakhs each, and the Kasimbazar estate with a demand of nearly 3½ lakhs. Eight other estates have a current demand of between one and two lakhs of rupees.

In the Tikari estate managed by Mr. A. Ogilvy, the collections were good for so bad a year, amounting to 104·7 per cent. on the current demand. But the management charges proper, that is, the charges on account of establishment and travelling allowances, &c., rose from Rs. 69,550 to Rs. 81,710, or from 9 to 12 per cent. on the current demand. The rise is attributed chiefly to the bringing of 33 villages under direct management, and raises the question as to whether direct management pays. It is not stated exactly what establishment was added for the 33 villages, or what their assets are as compared with the previous leases: but it seems possible that it would have been more profitable to let them remain under lease. Rupees 37,893 were spent on *gilandasi* or village irrigation works, being an increase of nearly Rs. 26,000 over the previous year; but still the sum is a small one for an estate with a current demand of nearly 7 lakhs of rupees, and especially small in a year when scarcity was prevalent in the neighbourhood.

In the Dighapatiya estates the cost of management came to 15 per cent. on the current demand. The amount spent on improvements was Rs. 10,052. This was nearly double of what was spent in 1890-91, but is a small amount compared with the sum of over two lakhs invested. The same remarks apply to the Kasimbazar and the Narhan estates, in both of which the cost of management (16·9 and 14·6 per cent., respectively) was excessive and the expenditure on improvements small.

A further loan of Rs. 2,72,000 to the Deo estate in Gaya, to free it from a debt due to Babu Kameshwar Prosad under the terms of a most objectionable usufructuary mortgage deed, is now under consideration by Government, and will be granted if the necessary funds can be found. The land revenue of this estate is Rs. 26,000, and the receipts Rs. 1,30,000 in round numbers, leaving a profit of Rs. 1,04,000. The expenses of management and maintenance are about Rs. 26,000, so that a surplus of about Rs. 78,000 remains, with which to pay off debts that amount to about 8 lakhs of rupees.

The rent-roll of the Basudebpar estate in the Midnapore district is Rs. 1,35,000, and the Government revenue Rs. 74,000. This leaves Rs. 61,000 net. Of this amount Rs. 32,000 odd were spent in management and maintenance, leaving a sum of about Rs. 29,000 a year towards clearing off the remaining debts of Rs. 3,10,000 odd.

In the estate Rajkrishna Banerji in Chittagong, the gross collections were 102 per cent. on the current demand, and the cost of management only 5·9 per cent.

The number of estates managed during the year under Act VI of 1876 ^{Encumbered estates in Chota Nagpur.} (the Chota Nagpur Encumbered Estates Act) was 59, of which 11 are in Hazáribágh, 32 in Lohardaga, 5 in Paláman, 3 in Singhbhum, and 8 in Manbhum. The following statement shows the demands, collections, and balances during 1891-92:—

DISTRICT.	Arrear demand.	Current demand.	Collections.	Percentage of collections on current demand.	Remissions.	Balance.
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Hazáribágh ...	49,371	73,813	76,583	103·7	565	50,441
Lohardaga ...	96,703	88,259	87,695	99·3	4,838	92,657
Paláman ...	2,477	8,461	7,657	90·4	417	2,864
Singhbhum ...	1,06,162	81,182	85,544	105·3	17,322	1,44,468
Manbhum ...	24,966	96,940	91,250	94·1	2,192	28,581
Total ...	3,39,679	3,48,655	3,48,735*	100·0	25,344	3,19,011

* Includes advance collections of Rs. 4,760.

The following statement shows the debts due at the commencement and end of the year by this class of estates:—

District.	Due at the commencement of the year.	Ascertained and incurred during the year.	Total.	Payments.	Reduced by compromise.	Balance due at the close of the year.
1	2	3	4	5	6	7
	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.
Hazáribágh ...	3,85,577	5,21,509	9,07,146	39,115	...	8,68,031
Lohardága ...	2,68,819	41,697	3,10,516	53,365	6,297	2,50,854
Paláman ...	27,206	75,292	1,02,498	6,673	...	95,825
Manbhúman ...	2,62,205	14,796	2,77,001	55,795	241	2,20,965
Singhbhúman ...	2,29,501	8,565	2,38,066	36,248	...	2,01,818
Total ...	11,73,308	6,61,919	18,35,227	1,91,196	6,538	16,37,493

III.—PROTECTION.

Course of Legislation.

DURING the year 1891-92, the Legislative Council of the Lieutenant-Governor of Bengal had under consideration four Bills. Of these, the Bill to amend the Court of Wards' Act, 1879, was transferred to the Government of India at an early stage, as it was found that a proposed amendment would trench on the provisions of a general Act, viz., the Civil Procedure Code. The Bill has recently been passed into law by the Supreme Council.

The Bill to further amend the Village Chaukidari Act, 1870, and the Bill for the regulation of Warehouses and the maintenance of a Fire-brigade, were introduced, read in Council, and referred to a Select Committee on the 23rd April 1892. The former of these two Bills, which gives effect to the proposals of the Police Committee of 1890-91, as approved by Government, in regard to the reconstitution of the village police, was passed by the Council, and has been submitted to the Government of India for the assent of the Governor-General. Provision has been made whereby the male rate-paying residents of a village may be directed to select persons to be members of the panchayat, subject to the approval of the Magistrate. The power, with certain limitations, of determining the number of chaukidars to be employed, and of fixing their salaries, is given to the Magistrate. The appointment also of a chaukidar rests with the Magistrate on the nomination of the panchayat. The duties and powers of the chaukidar have also been extended.

The Bill for the regulation of Warehouses and the maintenance of a Fire-brigade proposes to effect an equitable apportionment of the cost of the Fire-brigade between the owners of hazardous buildings and the general body of tax-payers in Calcutta and its suburbs, and is under consideration by the Select Committee.

A Bill to amend the Bengal Municipal Act, 1884, was introduced, read in Council, and referred to a Select Committee on the 16th July 1892. In consequence of numerous alterations and additions made in Select Committee, some of which involve important questions of principle, this Bill as amended has recently been republished for general comment.

Police.

THE sanctioned strength of the District Police, excluding Railway Police, was at the close of the year 74 superior officers and 22,789 subordinate officers and men, showing a net increase over the figures of last year of 6 head-constables and 73 constables, and a net decrease of 3 Sub-Inspectors and 25 town chaukidars. The Railway Police at the close of the year numbered 2 superior officers and 621 subordinate officers and men, against 607 in 1890. The number of men employed on purely police work is stated to be 21,032, and the proportion borne by this number to the total population of the Province was 1 to 3,503.

The police budget grant for the financial year 1891-92 was Rs. 41,84,396, and the total expenditure was Rs. 40,78,691, distributed as follows among the several heads:—

	1891-92.	1890-91.
	Rs.	Rs.
1. Inspecting agency	1,14,437	1,05,376
2. Pay of District and Assistant Superintendents .	4,62,692	5,07,539
3. Pay of Executive Police and establishment with good conduct pay and batta allowance	28,90,810	28,17,166
4. Travelling allowance	91,944	89,445
5. Fixed boat establishment	57,778	57,212
6. Special, regular, and contract contingencies	4,61,030	4,42,849
Total ...	40,78,691	40,19,887

The increase is explained as mainly due to the changes made last year with the sanction of the Government of India, in accordance with the recommendation of the Police Committee, viz., the abolition of the Superannuation Fund, and the raising of the pay of the lowest grade of constables in Bengal Proper from Rs. 6 to 7.

No progress appears to have been made during the year in substituting town chaukidars for constables, and opinions as to the policy of this measure, and the working of the town chaukidars, appear to vary greatly. Thus in the town of Burdwan the chaukidars appointed last year are reported not to have been a success; the Magistrate of Shahabad states that the town police in all the municipalities of his district have worked badly, and the Magistrate of Champaran expresses an opinion that Municipal administration has distinctly suffered by the substitution of chaukidars for constables. In Bhágalpur the Magistrate is so dissatisfied with the working of the town chaukidars that he recommends that only constables should be employed on this duty. On the other hand, in the towns of Bankura, Bishenpur, Khulna, Chittagong, Jamui, Malda, English Bazar, and all the municipal towns of the Chota Nagpur Division, the town chaukidars are reported to have worked satisfactorily, and in Murshidabad and Rangpur they are said to have shown themselves as efficient as the constables they replaced. The fact appears to be that the working of this force is seriously impaired by a rule which has been laid down, requiring the chaukidars to be employed on night duty only. The Lieutenant-Governor thinks the existing orders on this subject should be reconsidered, and has requested the Inspector-General to submit

a special report on it. He is inclined to believe that under proper rules and with judicious supervision, both efficiency and economy may be secured by the substitution of town chaukidars for ordinary constables. The town chaukidari system may be unsuited to great towns like Patna and Gaya, where there is a strong body of professional law-breakers or a large floating population, but the circumstances in the ordinary municipalities of Bengal are very different, and His Honour thinks it probable that town chaukidars may be employed with advantage in all places where the population is peaceable and there is little violent crime. It is reported that watch and ward duty is most unpopular with the regular force, and that in the Dacca Division 52 out of 53 resignations have occurred in the town police.

Some progress has been made in street lighting during the year. In the towns of Bally, Krishnagar, Dinapore, Motihari, and Chaulissa, lamps have been introduced, and additional lights have been provided in 41 other towns. The Inspector-General suggests, in view of the difficulty of inducing municipalities to spend money on this object, that where they cannot afford to erect street lamps, the Municipal Commissioners should be urged to provide oil for the lanterns of the police. This proposal has been recommended for adoption by small municipalities.

No doubt there is room for much improvement in the character and conduct of the rural police, and the Lieutenant-Governor hopes that the changes effected in the law which has lately been passed in the Bengal Council may lead to improvement. The principal object of this legislation has been to bring the village police into closer relations with the executive authority of Government, and while retaining the local knowledge of men resident in the village in which they are to be employed, to organize the chaukidars as a branch of the regular police in direct subordination to the Magistrate. Under the old law the village panchayet not only appointed the chaukidars, but had authority to decide within specified limits how many chaukidars should be employed, and to fix their salaries. Under the new law the panchayet will nominate, but the appointment of the village watch will rest with the Magistrate. The Magistrate and not the panchayet will determine the number of chaukidars and fix their salaries. In other provinces the status of the rural police has been raised by similar legislation, and it is hoped that a like result will now be attained in Bengal. The Lieutenant-Governor has called the special attention of all District Magistrates to the necessity of trying to raise the social status of the chaukidar by refusing to appoint men of the low castes and thieving habits who have hitherto been employed, and substituting for them men of better castes and more respectable position. This object has been achieved in other Provinces, and there is no reason why it should not be attained in Bengal also.

Next to low caste and disreputable antecedents, one of the causes which has done much to degrade the village chaukidar in his own esteem and that of the public, and to lessen his influence for good, has been the habit, too common among the Provincial Police, of treating him as a beast of burden and a menial servant. The Government is pledged to do all it can to stop this custom, and special orders have been issued on the subject. When the chaukidar recognises that he is a servant of the State and bears a sanad of appointment under the Magistrate's hand and seal, it may be expected that he himself will refuse to submit to ill-treatment, and that the inferior Police officers will understand that his status has been so raised that menial employment must not be thought of in connection with him.

The work and character of chaukidars and ghatwals remunerated by chakaran lands is almost universally condemned, and Sir Charles Elliott hopes shortly to be able to take up the whole question of the improvement or abolition of this system.

During the year additional police have been appointed in Pabna, Champaran, Monghyr, and the Sonthal Parganas, and 298 special constables were employed in 15 cases under section 17, Act V of 1861. These figures would seem to imply a very free use of section 17, and the Lieutenant-Governor notices that some of these special police were employed for three, four, and six months, and even for a year. His Honour has impressed upon all Magistrates the necessity for using this section

only in cases of emergency and of restricting its operation to the shortest possible period.

A force consisting of one subadar, one jamadar, five havildars, and 50 sepoya from the Dumka Special Reserve, and one jamadar, three havildars, and 44 sepoya from the Bhágalpur Special Reserve was detailed for service in Keonjhar in May 1891. The former were reported by Mr. Dawson, who was in command, to have behaved most creditably throughout, their drill and discipline meriting special commendation. The Bhágalpur Special Reserve, though composed of good material, were found less smart. A party composed of the ordinary armed reserve police from Cuttack and Balasore was sent up from Orissa under Mr. Guise to co-operate with Mr. Dawson's force, and their discipline and steadiness under fire were (as might be expected) much less satisfactorily reported on.

Casualties.

• The following table shows the details of casualties during the years 1890 and 1891:—

	1890.	1891.
Retirement on pension or gratuity	464 or 1.9 per cent.	452 or 1.9 per cent.
Resignation	972 or 4.1	760 or 3.2 "
Dismissal	624 or 2.6	588 or 2.5 "
Discharge	180 or .7	225 or .9 "
Desertion	70 or .3	40 or .2 "
Death	488 or 2.1	517 or 2.2
	2,798 or 11.7	2,582 or 10.9

The decrease in the number of desertions and resignations is attributed to the improvement effected in the position of the rank and file of the force by the discontinuance of the superannuation fund, the grant of free kits and a more liberal allowance for the maintenance of the kit, and the abolition of the lowest paid grade of constables in Bengal Proper. As these changes only came into force from or after July 1891, a still further improvement in this direction may be expected during the current year; apart, however, from any special measures taken for the improvement of the position of the force, the percentage of casualties has been steadily decreasing since 1886, as shown by the following figures:—

1886 casualties	... 14.7 per cent.
1887 ..	... 13.4
1888	12.0
1889	12.3
1890	11.7
1891	10.9

The record of grave misconduct of this class during the year is fortunately not a heavy one. Seventeen cases of real or alleged torture were under enquiry during the year. The most important of these was a case which occurred in Backergunge in 1890, in which a head-constable was charged with the most scandalous misconduct. The complainant's story was at first disbelieved, and it was only after several ineffectual efforts that he was able to secure a trial of the case. The accused head-constable was finally sentenced to 10 years' rigorous imprisonment at the Backergunge Sessions. Of the other sixteen complaints of police torture, eight were found to be false, six were held by Criminal Courts to be not sufficiently proved to justify a conviction, one ended in the conviction of a head-constable and four constables under section 330, Indian Penal Code, and one was pending at the end of the year.

Forty-four cases of extortion were enquired into during the year. Of these 11 were found to be false, 14 were not proved (five of these, however, ended in the departmental punishment of the accused officers), 11 were found to be true, and 8 were pending at the end of the year.

The following table shows in detail the number of punishments inflicted on members of the police force during the last three years:—

YEAR.	JUDICIAL CONVICTIONS UNDER THE PENAL CODE.			CONVICTIONS UNDER ACT V OF 1861.			DEPARTMENTAL PUNISHMENTS.		
	Number.	Percentage of officers.	Percentage of men.	Number.	Percentage of officers.	Percentage of men.	Number.	Percentage of officers.	Percentage of men.
1889 ...	830	1.2	1.4	168			4,997	45.0	17.5
1890 ...	336	1.1	1.6	160			4,828	44.0	16.2
1891 ...	260	.9	1.2	112			4,234	39.2	14.3

The figures seem to indicate a satisfactory improvement in the conduct of the force. There were seven cases of embezzlement of Government money or misappropriation of property: in three of these the accused were convicted in a Criminal Court, in three they were departmentally punished, and one was acquitted. At the close of the year 8,059 men wore one or more good-conduct stripes. This shows an apparent decrease of 3,354 from the figures of last year, but the Inspector-General reports that the latter figures were incorrect. Good conduct allowances amounting to Rs. 21,072 were disbursed during the year. Special money rewards were paid to 1,814 officers and men, and 52 received special promotion.

Every district of Bengal, with the exception of the newly constituted district of Palamau, was inspected during the year either by the Inspector-General, or by one of the Deputy Inspectors-General. Several districts were visited more than once, and 32 subdivisions were separately visited and inspected.

The incidence of crime in Bengal, division by division, for the two years 1890 and 1891, is shown in the following statement:—

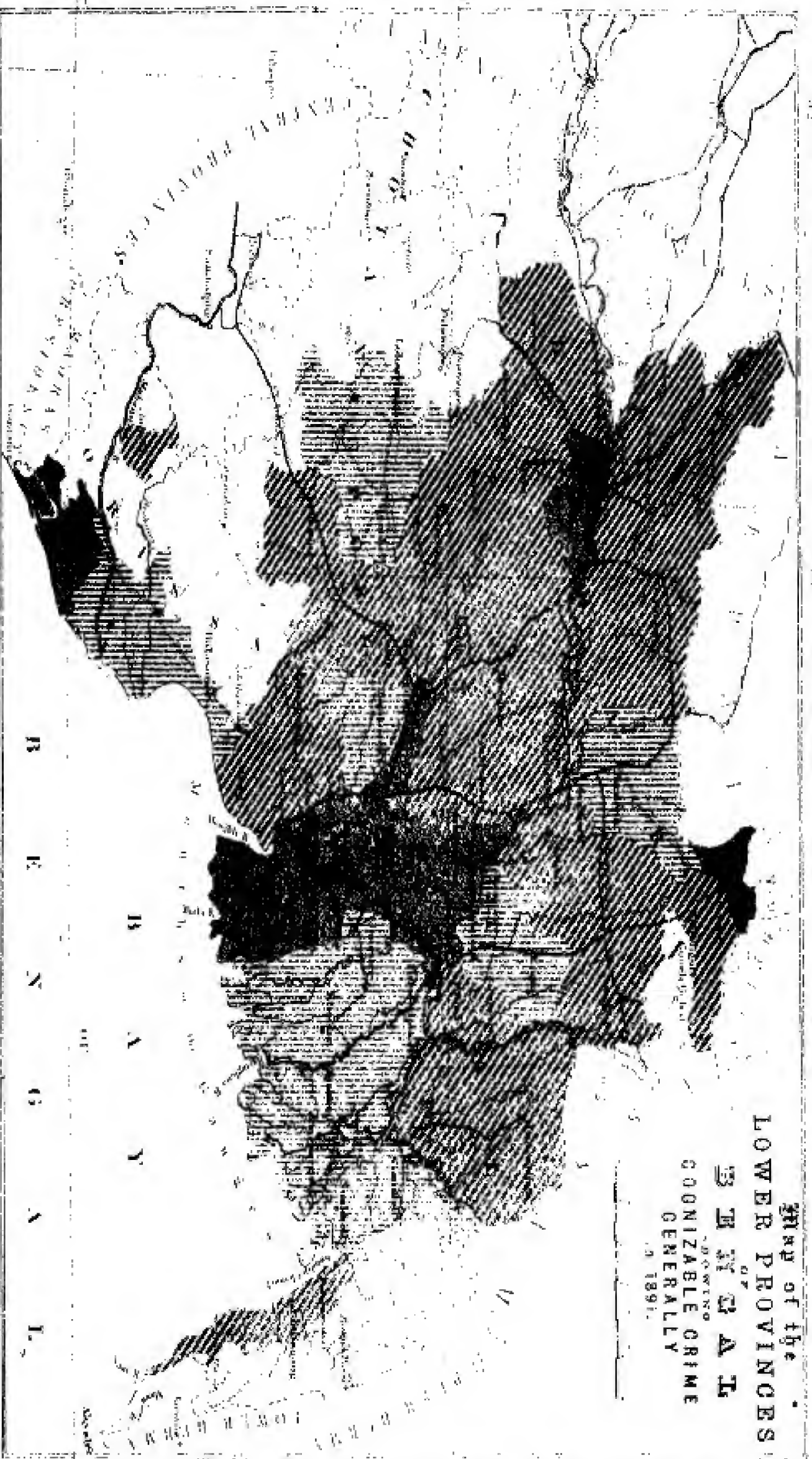
DIVISION.	Popula- tion, 1891. Census of	Cases of cognizable crimes.	Proportion of police to population.	1890.		1891.		Proportion of cases of cognizable crime to population.	
				Cases.	Persons.	Cases.	Persons.		
Burdwan	3,493	7,698,518	14,890	18,07	1 to 3,134	10	471	1 to 493	1 to 496
Presidency	3,280	2,841,970	14,745	13,90	1 to 2,181	1	42	1 to 803	1 to 511
Koynabhi	2,098	8,010,197	12,543	13,741	1 to 3,218	1	70	1 to 517	1 to 508
Dacca	2,222	9,945,127	10,421	15,013	1 to 4,130	1	60	1 to 848	1 to 692
Chittagong (ex- cluding Chit- tagong Hill Tracts).	1,973	4,953,705	9,868	5,720	1 to 3,707	1	28	1 to 734	1 to 538
Patna	4,360	15,790,737	20,137	30,130	1 to 3,880	1	67	1 to 517	1 to 474
Bhagalpur	2,127	8,592,490	14,115	14,193	1 to 4,135	1	68	1 to 446	1 to 606
Cooch	1,317	4,643,413	7,063	6,669	1 to 2,003	1	43	1 to 533	1 to 605
Chusa Nagpur	1,302	4,695,248	9,847	7,613	1 to 3,027	1	36	1 to 617	1 to 626
Total	12,407	70,520,275	109,230	109,096	1 to 3,141	1	371	1 to 501	1 to 544

With a view to effecting an improvement in the prosecuting agency in the Criminal Courts, the experiment has been tried in six districts of relieving the Court Sub-Inspector of the bulk of his clerical work and employing him primarily as a public prosecutor. The results have been favourably reported on, and it is proposed to extend the system.

The number of cognizable and non-cognizable offences reported during the years 1890 and 1891 was as follows:—

	1890.	1891.	Increase.
Cognizable ...	117,443	128,472	11,029
Non-cognizable	116,554	119,072	2,518

Map of the
 LOWER PROVINCES
 of
 BRITISH A T
 SHOWING
 COGNIZABLE CRIME
 GENERALLY
 IN 1891.



The increase in cognizable crime is distributed among all divisions, except Bhágalpur and Orissa, where there is a slight decrease; in non-cognizable crime the only marked variation occurred in the Chittagong Division, where there was an increase of 2,543 cases. As usual, varying explanations are given for the increase of criminal cases: but there can be little doubt that the main factor in the increase in serious crime has been the pressure of high prices, which prevailed throughout the year but grew more stringent towards its close. Part of the increase is also due to the more vigorous action taken for the suppression of public and local nuisances, prosecutions for which rose from 28,402 in 1890 to 34,158 in 1891.

The following table shows, division by division, the statistics of cognizable and non-cognizable crime in 1890 and 1891:—

Division.	COGNIZABLE.			NON-COGNIZABLE.		
	1890.	1891.	Increase or decrease.	1890.	1891.	Increase or decrease.
Burdwan	15,738	17,917	+ 2,179	21,005	20,351	— 654
Presidency	14,659	15,039	+ 410	17,647	16,574	— 1,073
Rajshahi	12,059	13,499	+ 1,440	9,922	10,468	+ 546
Dacca	13,250	15,528	+ 2,278	17,786	17,441	— 345
Chittagong	4,785	5,498	+ 713	12,026	14,569	+ 2,543
Total for Bengal Proper	60,521	67,541	+ 7,020	78,386	79,398	+ 1,012
Patna	28,841	32,946	+ 4,105	17,377	17,922	+ 545
Bhágálpur	14,341	13,997	— 344	11,766	11,911	+ 145
Total for Bihár	43,182	46,943	+ 3,761	29,143	29,833	+ 690
Orissa	7,016	6,838	— 178	5,639	6,112	+ 473
Chota Nagpur	6,724	7,355	+ 631	3,486	3,729	+ 243
GRAND TOTAL	117,443	128,473	+ 11,029	116,564	119,072	+ 2,508

It appears that, though the largest increase in cognizable crime has been in the Patna Division, where the pinch of scarcity was principally felt during the year, yet the increase is not proportionately greater than in the Dacca and Burdwan Divisions, where there was no marked distress though prices were high, while in Bhágálpur, where more or less severe pressure existed in parts, there was an actual decrease.

Cognizable offences reported during the years 1889, 1890, and 1891 are thus compared under the various main heads:—

	1889.	1890.	1891.
Cases against property	74,431	68,227	73,348
Ditto person ...	7,976	7,463	7,950
Ditto public tranquillity	3,177	3,185	3,126
Other cases ...	34,072	38,568	44,039
Total	119,656	117,443	128,472

It would seem, therefore, that there was less actual crime during 1891 than during 1889, the increase in "Other cases" being entirely due to the more vigorous suppression of nuisances.

The number of cases declared false was 6,631 or 5·1 per cent., the percentage for the three preceding years being 5·4, 5·8 and 6·0. In 1,025 cases, prosecutions were instituted, and in 381 convictions were obtained, besides which, in 916 cases compensation was awarded to the defendant under section 560 of the Criminal Procedure Code.

In paragraph 13 of the Resolution on the Report on the working of the Police in the Lower Provinces for 1890, the Lieutenant-Governor laid down the principle that in cases of house-breaking to commit theft, where nothing is stolen and where there is

Reported cases not enquired into.

no clue given, in cases of theft of sums below Rs. 5, where there is no clue, in cases which are of a purely civil nature, and in embroidered charges of assault where the embroidering is doubtful, enquiry should be refused by the police.

These directions, which were only intended by way of general guidance and not as laying down a hard-and-fast rule, have been in some districts misunderstood or improperly worked.

The Lieutenant-Governor hopes that by careful supervision and constant inspection District Superintendents will prevent any abuse of these rules in future.

The total number of cases tried before the Court of Sessions was 1,253, of which 397 ended in acquittal, and 856 or 68·3 per cent. in conviction. The proportion of persons convicted to persons committed for trial was 54·4, against 54·1 and 49·1 in 1890 and 1889 respectively.

The amount of crime of each class during the years 1889, 1890 and 1891, together with the results of trials for offences of each class, are shown in the following table:—

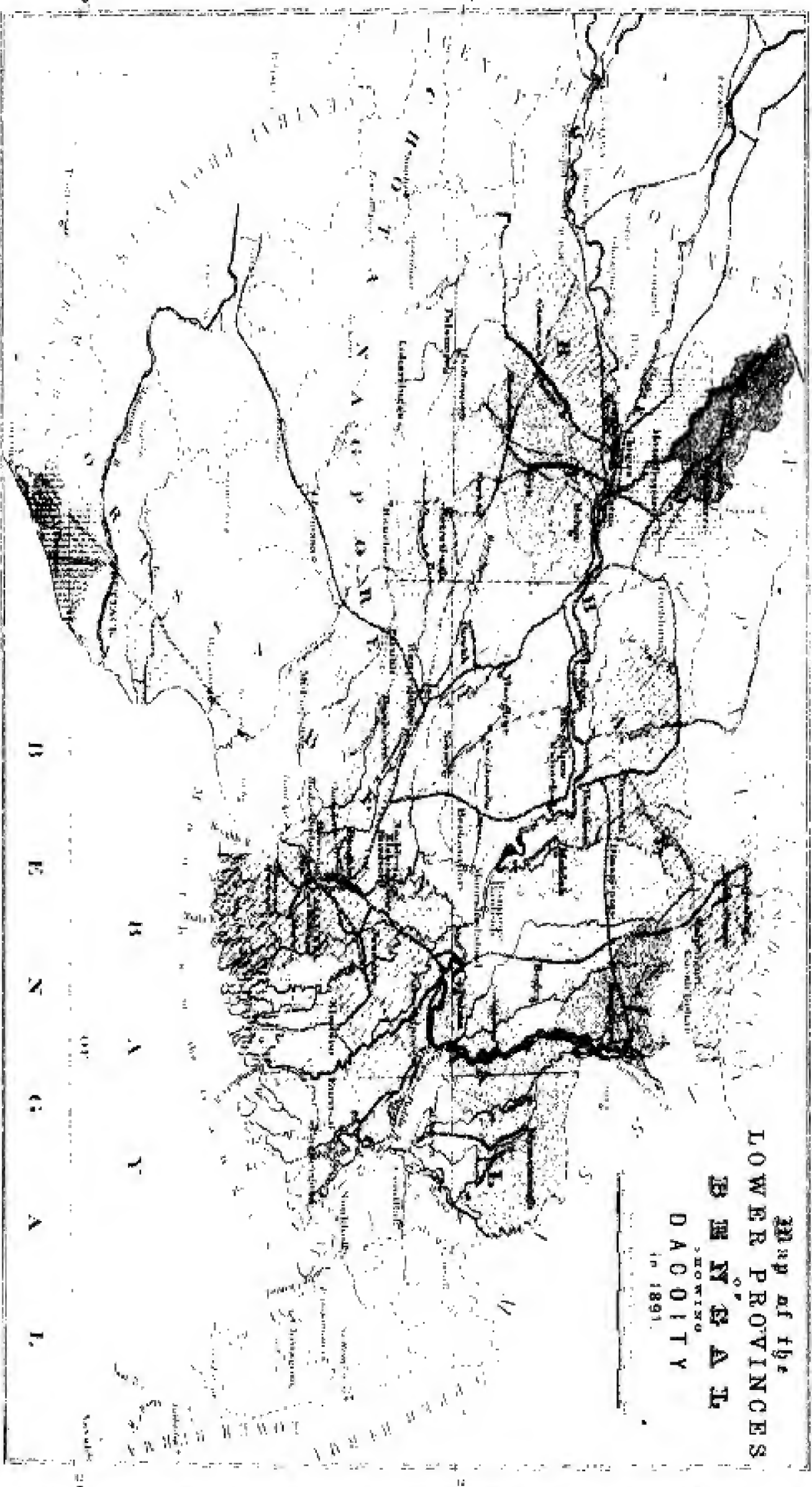
	CLASS I.			CLASS II.			CLASS III.			CLASS IV.			CLASS V.			CLASS VI.		
	1889.	1890.	1891.	1889.	1890.	1891.	1889.	1890.	1891.	1889.	1890.	1891.	1889.	1890.	1891.	1889.	1890.	1891.
	1889.	1890.	1891.	1889.	1890.	1891.	1889.	1890.	1891.	1889.	1890.	1891.	1889.	1890.	1891.	1889.	1890.	1891.
Offences reported	5,819	2,764	2,765	4,799	1,346	4,821	27,321	25,047	26,289	5,131	5,238	5,230	11,029	31,079	30,540	31,069	26,409	42,668
Percentage of persons actually tried who were convicted	58·4	53·7	54·0	45·4	46·1	46·5	51·5	52·9	51·3	57·8	59·7	57·3	54·2	51·0	52·4	59·0	59·5	58·4

There has thus been an increase during the year under every head except in class I (Offences against the State and public tranquillity), while the percentage of convictions shows no noticeable change in any particular.

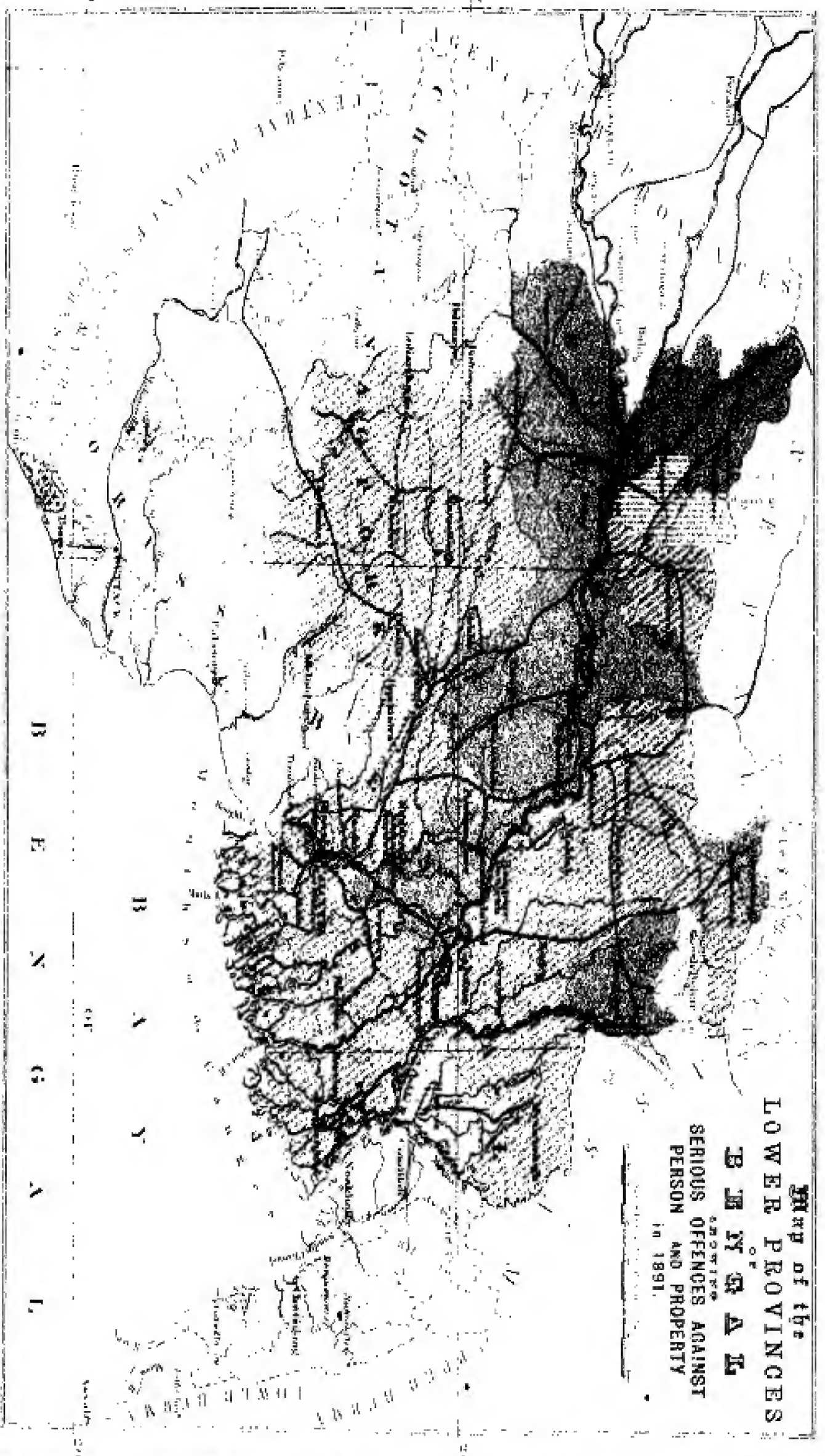
There is a decrease of 109 cases in this class, including a diminution of 52 in the number of riot cases. In all 2,187 true State and public tranquillity, and 310 false cases of rioting were reported, the Dacca Division showing 518 true cases, and the Presidency and Patna Divisions coming next with 321 and 319 true cases respectively. Very few of these cases were of any importance, as is evident from the fact that of 11,736 persons actually tried for this offence, only 201 came before the Court of Sessions. In the Burdwan Division no case occurred worthy of special notice. There has, however, been an increase of rioting in Midnapore, attributed to disputes between Miers, Watson and their raiyats. In the Presidency Division, Jessore shows only 104 cases against 217 last year, this result being due to the settlement of the indigo disturbances. In the Dacca Division the number of cases reported rose from 478 to 518, the increase being in the districts of Backergunge and Mymensingh. In Backergunge, of 96 cases classed as riots, eight were attended with loss of life and thirteen with severe hurt. In this district 3,338 persons were, during the year, bound down to keep the peace. In Faridpur, 134 cases, four of which were attended with loss of life, were reported, against 166 in 1890. The decrease is attributed to the more vigorous use of sections 106 and 107 of the Code of Criminal Procedure, 1,376 persons having been bound down to keep the peace during 1891 as compared with 503 in 1890. In the Patna Division two cases occurred, which might have had very serious consequences. In Gaya, at the Bakr Id festival, a riot arose between Hindus and Mussulmans with regard to the sacrifice of a cow; and at the Barahpur fair in Shahabad a force of 24 chaukidars and 10 police, who were escorting a number of cattle, were attacked by a large body of Hindus. Inspector Zinnat Hossein Khan having warned the rioters to desist, and having tried the effect of blank cartridge, finally ordered the armed constables to fire singly with ball cartridge; at the seventh shot a rioter fell dead and the rest fled. In these two cases the mischief was only prevented from spreading by the prompt action of the Magistrate in the first case, and the Inspector in the second.

Cases of this class increased from 4,340 to 4,821, the largest increase being Class II—Serious offences under the heads "Hurt by a dangerous weapon" against the person, and "Criminal force to public servants." The number of persons actually brought to trial for offences of this class was 7,677, of whom 46·2 per cent. were convicted, against 43·7 and 45·0 per cent. in the

Map of the
 LOWER PROVINCES
 SHOWING
 RAILROADS
 IN 1891



Map of the
LOWER PROVINCES
of
BRITAIN
 SHOWING
 SERIOUS OFFENCES AGAINST
 PERSON AND PROPERTY
 in 1891.



two preceding years. Of 1,261 persons tried by the Court of Sessions, 601 were acquitted and 660, or 52·3 per cent., convicted, the percentage of convictions in 1889 and 1890 having been 47·9 and 52·8 respectively. Murders reported increased from 319 to 360, the figures for the last seven years being—

1885	288	1889	316
1886	278	1890	319
1887	250	1891	360
1888	268		

These figures would seem to show either a steady increase in the amount of crime, or an improvement in the reporting of suspicious deaths; they are, however, to a certain extent influenced by variations in the method of classifying offences according to the views of individual Magistrates and Judges. The percentage of convictions to persons tried for murder fell from 23·1 in 1889 and 25·6 in 1890 to 20·9 in 1891. There were, however, 37 executions during the year, against 26 and 17 in 1890 and 1889 respectively. There were eight murders by dacoits during the year, of which four occurred at the same time in one village in Naulia. "Murders by robbers" numbered 16, of which 5 were in the Patna district, and there were 15 cases of "Murder by poison." For the former offence only three persons out of 14 sent up for trial were convicted and for the latter only one person was convicted.

There were 32 cases of "Drugging," against 28 in 1890: of these only eight ended in conviction.

No particular case calls for special comment, the most noticeable feature being the continued inability of the police to successfully work out murder cases. A good piece of detective work on the part of Mr. Roberts, the District Superintendent of Puri, and his subordinates is reported, by which, through advertisements in the *Police Gazette* and a native paper, two unknown Bengalis, whose bodies were found lying on the Ganjam road, were identified and their murderer traced and finally convicted and transported for life.

Class III.—Serious offences against property.

There has been a total increase of 3,203 cases under this head, divided as follows among the various offences:—

Serial No.		1890.	1891.	Increase.	Decrease.
30.	Dacoity	130	210	80	...
"	31. Preparation and assembly for dacoity	9	1	...	2
"	32. Robbery with hurt by poisonous or stupefying drugs	4	...	...	4
"	" Robbery with hurt by other means	16	12	...	4
"	33. Robbery in dwelling-house	24	29	5	...
"	" Ditto on the highway, &c.	16	40	24	...
"	" Other robberies	65	91	26	...
"	34. Serious mischief or cognate offences	714	729	15	...
"	35. Mischief by killing, &c., any animal	684	663	...	21
"	36. Lurking house-trespass or house-breaking, &c.	23,314	26,373	3,059	...
"	37. House-trespass with view to commit an offence, &c.	201	243	41	...
"	38. Receiving stolen property, &c.	4	6	2	...
"	39. Belonging to gangs of thugs, dacoits, &c.	10	2	...	8
Total		25,086	28,283	3,252	49
Net increase		...	...	3,203	

Of 6,787 persons actually tried, 3,324, or 52·8 per cent., were convicted and 2,970 acquitted.

There was an increase in dacoities in every division except Orissa and Chittagong, which latter division has been free from this crime for the last two years. The following table shows the number of dacoities in each division for the last six years:—

	1886.	1887.	1888.	1889.	1890.	1891.
Bardwan	23	23	18	34	29	22
Presidency	9	7	17	17	12	22
Bajpohari	23	23	16	17	27	48
Dacca	3	9	16	19	13	23
Chittagong	3	1	2	4	...	...
Patna	9	13	20	36	20	43
Bhagalpur	14	24	16	20	18	30
Orissa	4	4	14	14	8	7
Chota Nagpur	18	4	14	11	4	16
Total	103	109	132	172	130	210

The recrudescence of this serious offence in so many divisions is both remarkable and alarming, but it is satisfactory to notice that the police have also to some extent been more successful in dealing with it than in former years, 52 cases, or 23·5 per cent. of the whole, having ended in conviction and 195 persons, or 31·8 per cent. of those tried, having been convicted, against 25·5, 24·8, 23·2 and 21·0, the corresponding percentages for the preceding four years. The three worst districts were Patna, Gaya, and Champaran, with 18, 14, and 13 cases respectively. Midnapore is again free from dacoity, and thus the favourable opinion of Mr. Munro's work expressed in last year's Resolution is confirmed. In the Rajshahi Division the execution close to the frontier, by the Nepalese authorities, of the notorious criminal Nakalya Gurung is reported to have had a good effect on the criminal classes in the districts of Jalpaiguri and Darjeeling. Nine members of this man's gang were under trial at the end of the year. The District Superintendent of Police, Darjeeling, also reports that the Nepalese authorities gave much active assistance during the year by arresting absconders, and Sir Charles Elliott is glad to acknowledge the valuable help in the criminal administration of the Province thus afforded by the Nepal Darbar. In the same division the Inspector-General brings to notice the good work done by Mr. Ward, District Superintendent of Police of Pabna, who, with the help of Sub-Inspector Pearl Mohan Biswas, was successful in securing convictions in 8 out of the 18 cases of dacoity committed in his district, with the result that 23 persons were sentenced to long terms of imprisonment. In the Patna Division a Muzaffarpur case is reported to have been well worked out by Inspector Nokhoy Lal.

The increase in the number of robberies, especially of robberies on the highway, is also serious; but here, again, the police can show improved results, the percentage of convictions having risen from 36 to 42·4 per cent. of the number of cases, and from 38·8 to 39·8 of the number of persons tried.

Class IV.—Minor offences against the person.

The number of cases increased from 2,210 to 2,220.

Cases of this class increased by 1,763, from 38,078 to 39,841, while burgla-

Class V.—Minor offenders against property.

ries which, though strictly included in class III, are more conveniently discussed under this head, increased from 23,515 to 26,615, or by 3,100. The increase is attributed primarily to the pressure produced by high prices. Judicial results are bad, convictions resulting in 68 per cent. of cases decided, and 56 per cent. of persons tried being convicted. No great improvement in this respect can be expected until some satisfactory agency is organized for conducting prosecutions.

There is a net increase of 5,461 cases under this head, the chief increase being under nuisances (5,752 cases) and prosecutions for bad livelihood (412), while there has been

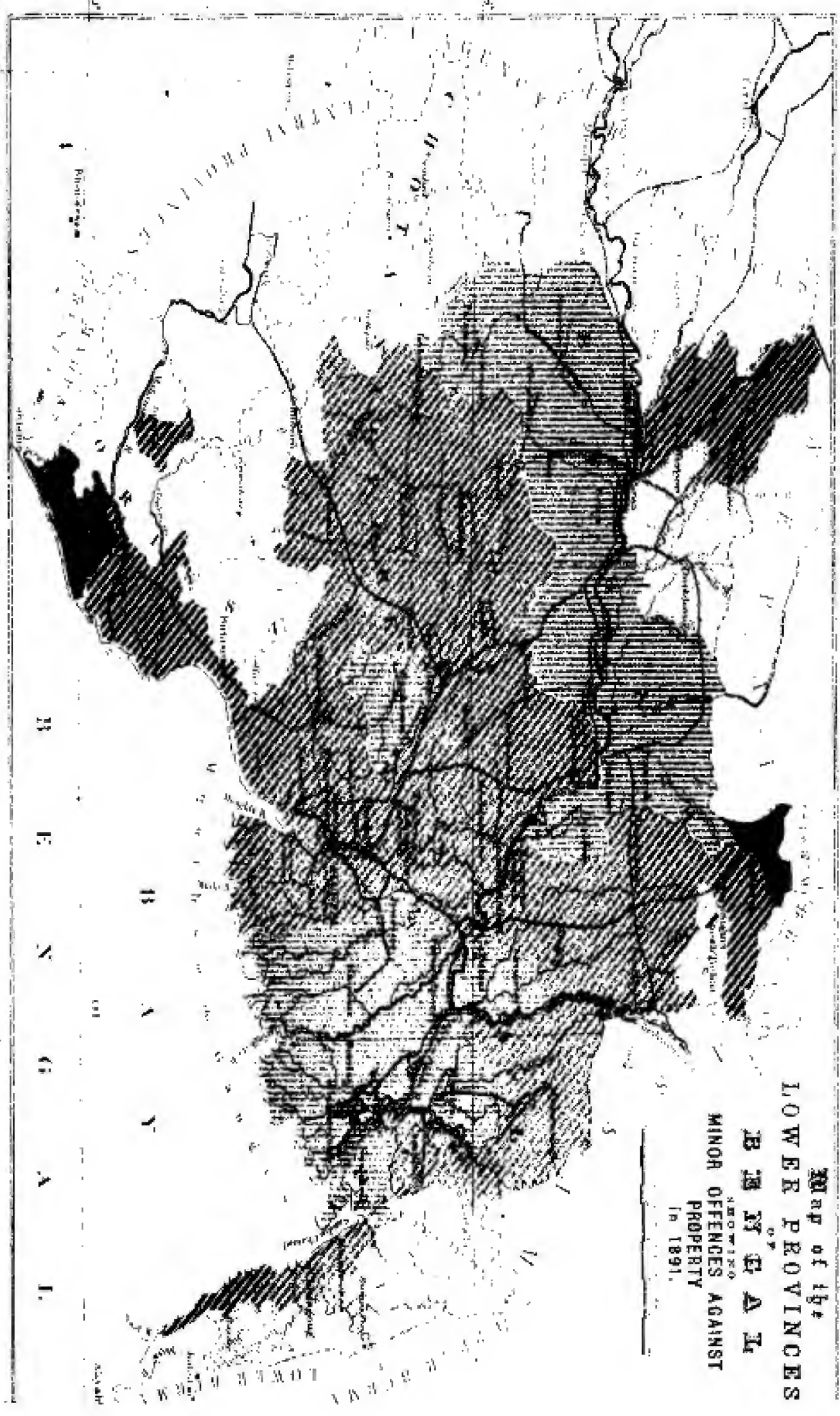
Class VI.—All other cases.

a decrease of 265, 235, and 217 in Excise, Salt and Customs, and Arms Act prosecutions respectively. Bad livelihood cases amounted to 2,772, in 1,677 of which the accused was convicted. In 11 districts, as against 4 last year, no cases were tried in the villages of the accused. Where communications are easy, as in Gaya, which is one of the districts in question, such cases ought to a large extent to be tried locally, and the Lieutenant-Governor agrees with the remark made by Mr. Henry that the moral effect of the trial of such cases on the spot by a Magistrate on tour, who will decide them then and there upon information volunteered by the people, is very beneficial. Only two cases require special notice. In Khulna some notorious suspects, who were being prosecuted for bad livelihood, waylaid and murdered one of the principal witnesses against them. They were convicted, and one of them sentenced to death, and two others to transportation for life. In Pabna, the District Superintendent, in December 1890, pressed to have security taken from five leading Shandars of Surjapur; proceedings were not taken till September 1891; in the meanwhile, these men with others had gone off on an expedition in which they committed ten dacoities in as many days, for which they have since been sentenced to seven years' imprisonment.

Surveillance.

At the close of the year, 46,725 persons were named in the registers, of whom 42,214 had either been convicted, or ordered to furnish security for good behaviour, and 4,511 were suspects. The police, however, had only to deal with 36,518 persons,

Map of the
LOWER PROVINCES
IN THE
MINOR OFFENCES AGAINST
PROPERTY
IN 1891.



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the balance being in jail or untraced. Rules have recently been issued laying down definite principles for the classification of offenders for the purposes of police registration and surveillance, and prescribing that only really dangerous criminals shall be transferred to the jails of their own districts for release. By these rules it is only such offenders who will be kept under strict and constant surveillance, less dangerous criminals being visited only occasionally at irregular intervals. The illegal practice of escorting released prisoners to their homes has also been put a stop to.

These cases decreased by 217. The Lieutenant-Governor would be glad to see the police devote their energies more to preventing the exportation of arms to Native States and less to instituting prosecutions for the unlicensed possession of worn-out and useless weapons.

The total number of non-cognizable offences reported was 119,071, against 116,554 in 1890. The increase or decrease under each class of crime is shown under the following table:—

Class	I	...	Number of cases.		Increase.	Decrease.
			1890.	1891.		
	I	...	8,175	8,929	754	...
	II	...	29	23	...	6
	III	...	857	922	65	...
	IV	...	56,333	59,083	2,750	...
	V	...	19,115	9,609	...	9,506
	VI	...	11,284	11,779	495	...
	Special laws	...	29,791	28,726	...	1,065
Total	...	...	116,554	119,071	2,517	...
			Net increase		2,517	

The figures call for no special remarks.

One of the most important aids to efficient police investigation and detection of crime is the punctual conduct of magisterial work, and it is evident that delays and postponements must facilitate confusion of mind and forgetfulness of facts, dispirit honest witnesses, and afford opportunities for buying off dishonest ones. His Honour is glad to notice that the percentage of cases postponed six or more times has fallen to 7·4 from 8·2 per cent. In 10 districts, viz., Bankura, Howrah, Jessore, Khulna, Jalpaiguri, Chittagong, Patna, Monghyr, Purnea, Cuttack, and Lohardaga, the percentage of cases remanded six times or more exceeds 10 per cent. Such a result is very bad, but many of the remands must relate to cases decided before the circulation of Government orders on the subject. Mr. Nolan, the Commissioner of Rajshahi, writes with reference to the despatch of criminal business: "In no branch of the administration have I ever experienced an improvement so sudden and so great as that effected during the year in the punctuality with which criminal justice is administered. The earlier records inspected by me frequently show a disposition to delay and put off the trouble of examining witnesses at any cost to them; in those relating to the latter part of the year, I found little to criticise in this respect."

There were 1,790 re-convictions, against 1,824 in 1890. The Lieutenant-Governor regrets to notice one bad case reported by the Inspector-General, in which a Deputy Magistrate refused to allow time for the police to enquire into the antecedents of an offender on trial before him, and thus sentenced to one month's imprisonment for theft a notorious Gonda Barwar with six previous convictions on record against him.

A detailed report on the proposed introduction of the anthropometric system for the identification of criminals, a copy of which was forwarded for the information of the Government of India, was submitted at the close of the year. Since then further progress has been made, rules have been drawn up, and a considerable number of officers have been taught how to measure and record all details. Some 3,000 leading criminals in the jails have been measured, and the classification of their roll cards is being carried out, while mechanical appliances are being invented to simplify measurement and to reduce the margin of possible error to

a minimum. The Lieutenant-Governor is glad to notice that valuable assistance has been rendered to the police officers engaged in this work by the willing co-operation of jail officials, and the arrangement by which the measurements made by the police will be copied into the jail admission registers is likely to prove a useful measure. Altogether the Lieutenant-Governor has every reason to be satisfied with the progress made in carrying out this important experiment.

In accordance with the instructions conveyed in paragraph 22 of the Government Resolution on the Police Report for

Crime maps.

1890, these maps have been generally introduced, and the preparation of two interdependent maps in every district has been ordered. One of these maps shows the residences of all B and C class convicts and absconded offenders, and the other the incidence of all true crime against property. These maps, if carefully prepared, should be of great value in helping District Superintendents to localize crime and to connect it with bad characters.

The total number of cases, cognizable and non-cognizable, reported during 1891 was 60,440, against 61,543 in 1890; of these, 48,569 were from the Town and 11,871 from the Suburbs.

CALCUTTA AND THE SUBURBS.

Reported cases.

In the Town 27,182 cognizable cases were tried by the Magistrates, of which 24,808 ended in conviction in the Magistrate's Court and 30 at the High Court Sessions. In the Suburbs, of 8,113 cases tried, 7,717 ended in conviction, viz., 7,704 in the Magistrate's Court and 13 in the Sessions Court. This is a creditable outturn of police work. Of cases under the Penal Code, there was an increase from 8,439 to 8,742 in cognizable offences, and from 6,142 to 7,022 in non-cognizable offences, while miscellaneous cognizable cases rose from 26,592 to 27,893. Miscellaneous non-cognizable cases, on the other hand, fell from 20,369 to 16,788. The increase in cognizable cases is due to prosecutions for public and local nuisances, street nuisances, and cruelty to animals. The figures of cognizable crime under the Indian Penal Code for the years 1889, 1890, and 1891 are 3,712, 3,327, and 3,289 respectively. In the Town there was a decrease of 35 cases, compared with the figures of 1890, in serious offences against person and property: a decrease of 87 in minor offences against property: an increase of 552 in other offences, chiefly cases of street obstruction (section 283, Indian Penal Code) and cases under the Hackney Carriage Act, and an increase of 960 in offences under special and local laws. Out of a total population of 466,150 in the Town proper, including the Fort, the Esplanade, and the Port of Calcutta, 10,763 persons were convicted of offences under the Penal Code during the year.

Fifty-eight false cases were brought in the Town and 18 in the Suburbs, against 43 and 18, the corresponding figures for last year.

False cases.

Thirty prosecutions for bringing false complaints were instituted in the Town, and in 16 cases convictions were obtained. In four of these cases the offenders were sentenced to imprisonment, and in 12 they were fined. Besides these, compensation was granted in 20 other cases under section 552, Code of Criminal Procedure. In the Suburbs prosecutions were instituted in 13 cases, and in two cases the offenders were sentenced to imprisonment, and in two were fined. In no case in the Suburbs was compensation granted. The Lieutenant-Governor hopes that Magistrates will not overlook the power of granting compensation for vexatious prosecution conferred on them by the provisions of the new section 560 (1) of the Indian Penal Code.

The value of property stolen in the Town and Suburbs during the year was Rs. 1,17,901, of which Rs. 68,445, or 58.05 per cent., was recovered.

Property stolen and recovered.

This percentage, in spite of a falling off in the Suburbs, due to one or two large undetected burglaries and thefts, is higher than in any preceding year. In the Town alone the percentage was 63.56, against 56.17 in 1890 and 49.02 in 1889.

In the Town there were seven unimportant cases connected with coins, in which eight persons were arrested and seven convicted, and one case connected with stamps, in

Cognizable offences. Town.

which two stamp vendors were fined Rs. 500 each for selling used court-fee stamps. There was one case of murder by poison, in which five coolies of the

Chamar caste were poisoned, of whom three died and two recovered. The poison used was aconite, and was administered by two other members of the caste, who were arrested and put on their trial. The evidence against them was not, however, altogether trustworthy, and the jury, under direction of the Judge, acquitted them. There were three other true cases of murder, and one false case, due to a false confession of murder made by a man of unsound mind. In two cases the accused were convicted; in the third the jury returned an inexplicable verdict of not guilty. There were three cases of culpable homicide not amounting to murder, in two of which the accused were convicted. In the third case the accused is still at large. There was one case of alleged rape, in which, however, there was no evidence of any more serious offence than indecent assault, and the accused was discharged. Twenty-five cases of grievous hurt occurred and two of administering stupefying drugs. In one of the latter cases the victim died, and the accused would probably have been convicted of murder but that no poison could be traced. Thirty-six cases of hurt by dangerous weapons were reported, and 22 cases of kidnapping, but only one case of theft of ornaments from a child. The Lieutenant-Governor is glad to notice that 451 children wearing ornaments, who were lost in the streets during the year in the town and suburbs, were restored to their parents with their ornaments intact. There were eight cases of causing death by a rash and negligent act, and five of robbery. The true cases of burglary and lurking house-trespass numbered 106, against 154 and 179 in the years 1890 and 1889, and the number of cases detected was 79, against 87 and 109 in the same two years. The number of thefts fell from 1,855 in 1889 and 1,549 in 1890 to 1,495 in 1891; of these, 815 cases were detected. There were 343 cases of breach of trust, including thefts by carters and boatmen; 530 persons were put on their trial for offences under the Gambling Act; and there were 2,849 cases and 2,534 convictions under the Hackney Carriage Act. The number of persons arrested for cruelty to animals was 6,833, and of these 6,521, or over 95 per cent., were convicted.

The total number of offences under the Penal Code and under Special and Local Laws, respectively, was 5,357 and 14,829, against 4,554 and 17,461, the corresponding figures for 1890. These figures include one case of an offence against the State under sections 124A and 500, Indian Penal Code, three cases of forgery, nine of extortion, two important cases of cheating, and the celebrated case of criminal breach of trust known as the "Imperial Diamond Case." The first and last of these alone call for special remark. The case under sections 124A and 500, Indian Penal Code, was brought by Government against the *Bangabasi* newspaper for publishing defamatory and seditious articles. The charge under section 500 was abandoned at the trial before the High Court, and in the end the special jury, by whom the case was tried, were unable to agree in their verdict. A new trial was ordered, but the accused having expressed contrition, a *nolle prosequi* was entered, and they were discharged. In the Imperial Diamond Case, Mr. A. M. Jacob, a well-known diamond merchant, was charged by His Highness the Nizam of Hyderabad with criminal breach of trust in respect of 23 lakhs of rupees. He was finally acquitted at the Sessions.

There were altogether 8,237 cases, against 8,155 in 1890. There were seven cases of murder, two of attempted murder, and two of culpable homicide. The number of burglaries was 132, in 58 of which detection followed, and of thefts 403, of which 203 were detected. The most important case which occurred during the year was that known as the Shambazar riot case. In this case a rumour that the purchase of some land by a Hindu would result in the removal of a temporary building used as a mosque, led to an unprovoked attack on the police by certain Muhammadans of the Shambazar quarter. The police were armed only with batons. One police constable was killed, and 18 members of the police force were so severely injured as to be incapacitated from duty, while 51 others received slight injuries; while of the rioters, one was fatally injured, and some 50 more wounded more or less severely. The results of the trial of the offenders were unsatisfactory in the extreme. The rioters were put on their trial in three batches. In the first trial, several of the prisoners were convicted. In the second, all were acquitted, the evidence as to identity being

somewhat faulty. In the third case, in which the prisoners were almost exclusively men who were wounded in the *mêlée*, and sent direct from the spot to the hospital, and never lost sight of, and as to the guilt of the great majority of whom no unprejudiced person could entertain a doubt, the jury returned a verdict of acquittal, which the Judge accepted, not thinking it advisable to refer the case to the High Court. One result of the riot has been that the police have been armed with more efficient weapons, in case such an emergency should occur again.

Non-cognizable offences. Suburbs.

There were 3,619 cases, against 4,496 in 1890. There was one case of forgery and three cases of extortion, but no case that calls for special remark.

There were 66 cases of suicide during the year, of which 48 occurred in the Town and 18 in the Suburbs; 24 of these suicides were by hanging and 23 by opium-poisoning.

Suicides and accidental deaths. The number of accidental deaths during the year was 308, against 301 in 1890: of these, 36 were those of persons run over by vehicles. Only two fatal cases occurred, in which there was evidence of negligence or rashness on the part of the driver. Ninety-nine persons were prosecuted for rash and furious driving, and 91 were convicted.

Forty-one vagrants were admitted into the Government Workhouse during the year, and 5 were in the Workhouse at the close of 1890, making a total of 46. Of these, 25 were discharged on obtaining employment, seven were released under the first clause of section 16 of the Act, five absconded, two obtained permission to leave the Workhouse temporarily and failed to return, one was imprisoned, one absconded from the ship in which he was to have been deported, and four remained in the Workhouse at the close of the year. During 1890 no inmates of the Workhouse absconded, and the Lieutenant-Governor regrets to notice the falling off in this respect. The total expenditure incurred by Government in working the Act was Rs. 3,725. Sixty-nine seamen, who found refuge in the Alms House, were all shipped during the year.

Fire-Brigade Act, IV (B.C.) of 1883.

The steam fire-engines of the Fire-Brigade were in attendance at 26 fires during the year, against 47 in 1890, and the manual engines kept at the out-stations rendered assistance at 23 other small fires. The only serious fire during the year was on the American ship *Kenilworth* in the Port; this fire was not got under for $4\frac{1}{2}$ hours, and the loss was estimated at Rs. 1,70,000. There were no fires during the year in jute mills or presses. None of the fires was attended with loss of life.

Constitution of the Police Force.

Superintendents	8
Inspectors	50
Sub-Inspectors	7
European Sergeants and Constables	52
Darogas	11
Sergeants	78
Corporals	169
Special Constables	51
Constables	2,481
Mounted Police	22

and Rs. 16

The total strength of the force was 2,873, as shown on the margin. This is an increase of 13 over the numbers of last year, the increase being due to the entertainment of a Court Sub-Inspector and 12 special constables. The total cost of the force was Rs. 6,22,254, against Rs. 6,14,634 in 1890. The increase is principally due to the payment of heavy law charges from the police grant. The pay in the two lowest grades of officers having been found insufficient to attract educated and respectable men to the ranks in the hope of promotion, was raised during the year from Rs. 10 and Rs. 12 to Rs. 12

Adjournment of Police cases.

The Lieutenant-Governor is glad to notice a further decrease in the number of adjourned cases. These fell from 422 in 1889 and 308 in 1890 to 289 in 1891, and of these, 226 cases were disposed of at the second hearing.

Destruction by and of noxious wild animals and venomous snakes.

The total number of persons reported to have been killed by wild animals in 1891 is 1,584, against 1,301 in 1890; the increase being shared by all the divisions except Bhágalpur and Chota Nagpur.

The number of deaths caused by tigers rose from 350 to 492. Of these, the Lohardaga district of the Chota Nagpur Division is responsible for no less than 163, and the neighbouring district of Hazáribágh for 42. This mortality

is reported to be due to a family of man-eating tigers which haunt the neighbourhood of Tandwa in Hazáribágh. Every effort has been made to secure the destruction of the animals, but the Commissioner reports that the repeated attempts of local shikaris, encouraged by the offer of a reward of Rs. 200 for each tiger, and expeditions undertaken by European sportsmen have been alike unsuccessful. A reward of Rs. 100 has now been offered for every tiger killed in the immediate neighbourhood of Tandwa, and a reward of Rs. 200 for any tiger destroyed over a human kill. In Gaya, in the Patna Division, man-eating tigers caused the deaths of 51 persons; special rewards have been offered, but so far without effect. The 24-Parganas and Mymensingh districts of the Presidency and Dacca Divisions show 28 and 35 deaths from tigers, against 13 and 10, respectively, in 1890, and in Chittagong a man-eating tiger, which has been giving trouble since 1887 and is still at large, caused 30 deaths, against 12 in 1890.

The number of persons killed by leopards was 170, compared with 71 in 1890; the increase being due to the extraordinary ravages of a man-eating leopard in Rajshahi, which caused no less than 96 deaths. A reward of Rs. 100 was offered for the destruction of this brute, and it has been shot since the close of the year.

Deaths caused by wolves and hyenas increased from 74 to 103, the increase being due to the mischief done by wolves in Muzaffarpur and Darbhanga in the Patna Division, where they caused 15 and 33 deaths, respectively, against 3 and 18 in 1890. Seven hundred and sixty-five deaths were attributed to other animals, against 736 in 1890. For the majority of these jackals and crocodiles are responsible.

During the year 1891, 21,657 head of cattle are reported to have been killed by wild animals, against 21,610 in the year 1890. The chief increase is in the Chota Nagpur Division, where the number of cattle lost rose from 6,090 to 8,507, owing to the greater destruction caused by tigers in Lohardaga and Singhbhum, and by wolves, hyenas, and "other animals" in Manbhum and Singhbhum. In the latter two districts the number of cattle killed was 1,544 and 1,500, against 245 and 328 in 1890. The increase may be supposed to be rather in the number of cases reported than in the number of cases occurring. In Lohardaga, tigers killed 2,728 head of cattle out of a total of 7,204 for the whole Province. In the Patna Division the number of cattle destroyed rose from 592 to 760, the increase being due to the greater destruction caused by every class of animal, except bears, in the Gaya district.

In the Rajshahi Division the number of cattle destroyed fell from 6,982 to 5,503, the decrease being in the loss attributed to tigers and leopards, the destruction caused by wolves and hyenas having largely increased. In the Presidency Division, the loss of cattle fell from 2,283 head to 1,772, the decrease being entirely due to the smaller amount of damage done by leopards in Nadia. The number of cattle reported as destroyed by bears in the whole Province is only 33, against 258 in 1890. As these animals do not usually prey on cattle, it is probable that the smaller figure is nearer the truth.

The total number of wild animals killed fell from 6,807 in 1889 and 5,311 in 1890 to 4,882 in the year under review. Two hundred and thirty-nine tigers were destroyed and 838 leopards, against 275 and 892, respectively, in the previous year. The only noticeable decrease in tigers killed is in the Rajshahi and Dacca Divisions, where the number fell from 75 and 73 to 39 and 34, respectively. In the Presidency, Chittagong, and Bhágalpur Divisions, the number of tigers destroyed amounted to 38, 40, and 17, against 29, 23, and 1 in 1890. It is noticeable that in the district of the 24-Parganas, where the number of persons and cattle killed by tigers has increased from 13 and 44 to 28 and 141 respectively, the number of tigers destroyed has also increased from 7 to 25, and it would appear that there has been an unexplained incursion of these animals into the district during the year. The Commissioner of Rajshahi and the Magistrate of Monghyr both report a continual decrease in the number of wild animals in their respective jurisdictions.

In the district of Hazáribágh, two tigers which had begun to be destructive to human life were killed through the endeavours of the Tekait of Gawan, and in Mymensingh organized shooting parties are yearly held by wealthy zamindars, at which many tigers and leopards are said to be killed.

During the year 1891 the total amount paid in rewards for the destruction of wild animals was Rs. 12,857, against Rs. 12,821 in 1890.

In accordance with the views of the Government of India expressed in the Home Department Resolution No. ²⁵ ₁₀₃₆₋₁₀₃₇ ^{Part.}, dated the 15th October 1891, the Lieutenant-Governor has, in order to facilitate the payment of rewards, authorized all Subdivisional Magistrates to grant such rewards on application made to them.

The number of deaths of human beings and of cattle reported to be due to snake-bite fell from 10,483 and 538 in 1890 to 10,031 and 409, respectively, in 1891. The decrease in the number of persons killed was distributed among all the divisions, with the exception of Patna and Bhágalpur, and is in most cases attributed to the absence of high floods during the year. In Chota Nagpur the heavy mortality is thus explained by the Commissioner:—

“The dirty habits of the aborigines in the interior is in a large degree responsible for such mortality from snake-bite. Their villages are generally situated in the vicinity of jungles. All sorts of rubbish are heaped round their villages, as well as within their huts, and they build their huts so as to admit of no light, thus giving the snakes great facilities for making holes, and taking up an abode in their houses.”

The number of snakes killed during the year was 43,805, and rewards amounting to Rs. 4,150-12 were paid for their destruction, the corresponding figures for 1890 being 42,555 and Rs. 3,652-10.

In accordance with the orders of the Government of India, special attention has been given to the clearing away of jungle round houses in villages and towns. The results cannot be said to have been satisfactory, and it must be admitted that the desire of the people for privacy and their clinging to old habits is too powerful for any great improvement to be effected in this direction.

Any orders for clearing homesteads of jungle and rank vegetation can from the nature of the case be applicable to Eastern and Central Bengal and Orissa only. In Bibár there is as a rule little injurious jungle to clear away, and snakes do not so much haunt the jungle as the out-houses and rubbish with which all dwellings are surrounded.

The number of licenses issued under the Arms Act in form XI, for the purposes of destruction of wild animals or protection of crops, was 824, against 5,003 in the preceding year. The Burdwan Division, the districts of Nadia, Murshidabad, Dinajpur, Bogra, Jalpaiguri, Dacca, Tippera, Chittagong, Chittagong Hill Tracts, Patna, Muzaffarpur, Darbhanga, Saran, Sonthal Parganas, Cuttack, Singhbhum, and the Gurjat Maháls showed no licenses in this form issued during the year 1891.

The only Government forests which are not open to shikaris are the Khurda forests in Orissa and those in the Chittagong Hill Tracts. In all other forests all facilities compatible with the protection of the forests from the danger of fire are afforded to sportsmen, subject to the rules which have been passed constituting a close season for the protection of game during certain periods of the year.

Criminal Justice.

THE number of cases pending trial in 1891 before the High Court in its original and general jurisdiction was 132. Of these High Court—General and Original jurisdiction. 120 were decided, as against 112 in 1890. There were 187 persons under trial, of whom 71 were acquitted or discharged, 101 were convicted, and 15 remained under trial at the end of the year. Of the number convicted, 40 were sentenced to death, 18 to transportation, 42 to rigorous imprisonment, and 1 to simple imprisonment.

Inclusive of 73 cases pending at the commencement of the year, the total number of persons who appealed to the High Court, or in whose cases appeals were preferred by Government under section 417, Criminal Procedure Code, from judgment of acquittal, or references were made under sections 432 and 438, or whose cases were dealt with under section 435, was 3,884, as compared with 3,622 in 1890. The results of these appeals and references are as shown below:—

Appeals or applications rejected	1,709
Sentences or orders confirmed	983
Ditto modified	290
Ditto reversed	670
Proceedings quashed	1
New trials or further enquiries ordered	97
Numbers of persons whose cases remained undecided at the end of the year	134
Total	3,884

THE number of Stipendiary Magistrates in Calcutta and of Sessions Judges and District Magistrates outside the Presidency town remained unaltered. The number of Honorary Magistrates in Calcutta was 98, as against 95 in 1890. The total number of benches of Honorary Magistrates inclusive of those in Calcutta was 220 as against 219 in the preceding year, and the number of Magistrates of each class at the close of the years 1890 and 1891, respectively, was as follows:—

	1890.		1891.	
	Calcutta.	Outside Calcutta.	Calcutta.	Outside Calcutta.
Stipendiary ...	2	396	2	391
Honorary ...	95	1,889	98	2,028

Of the Stipendiary Magistrates outside Calcutta, 266 exercised the powers of a Magistrate of the 1st class, 61 of the 2nd class, and 64 of the 3rd class, as compared with 271, 45, and 80 respectively employed at the close of 1890. There was an addition to the staff of Honorary Magistrates, but the number of benches remained almost the same.

The total number of cases before the Sessions Courts in their original criminal jurisdiction was 1,706, of which 1,677 were decided, as against 1,518 in 1890. There were 3,822 persons under trial, against 3,250 in 1890. Of these 16 died, escaped, or had their cases transferred, 1,353 were acquitted or discharged, 1,807 were convicted, 86 were committed or had their cases referred to the High Court under sections 307 and 374, Criminal Procedure Code, and 560 remained under trial at the close of the year. Of the persons convicted, 230 were sentenced to transportation, 1,491 to imprisonment, and the rest to whipping or to pay fines.

The districts in which trials by jury were held and the offences which were so triable remained as in previous years. The number of such trials during 1891 was 290, as compared with 285 in the preceding year. Of the cases so tried during the year, the Sessions Judge approved of the verdict of the jury in 240 cases, and disapproved of it wholly in 33 cases and partly in 17 cases. In 20 cases in which the Sessions Judge disagreed, references were made to the High Court. All of these references were heard and determined with the result that in half the number the verdict of the jury was reversed, and in the remaining half it was upheld.

The total number of cases for disposal on the appellate and revisional side of the Courts was 10,310, of which 9,635 were decided, as against 9,284 in 1890. The number of appellants and applicants, including those whose cases were pending at the commencement of the year, was 16,132, as compared with 15,138 in 1890. Of these the appeals and applications of 6,022 persons were rejected. The original sentences and orders were confirmed regarding 5,816 persons, modified regarding 1,445, and reversed regarding 2,352 persons, while in the cases of 593 persons new trial or further enquiry was ordered. Proceedings in the cases of 3 persons were quashed. The cases of 412 persons were referred to the High Court for revision. The number of persons whose cases were disposed of was 16,553. The cases of 797 persons remained pending at the end of the year, and of 169 persons were shown under the head "Died, escaped or transferred."

The total number of cases brought to trial in the Courts of various Magistrates in Bengal, excluding the Courts of the Presidency Magistrates, was 153,158, and the number decided was 153,697, against 143,973 in 1890. As in previous years, benches of Magistrates and Honorary Magistrates sitting singly assisted materially in disposing of the extra work by dealing with 46,420 cases, as compared with 40,748 in the preceding year. The number of persons who were concerned in the above cases and the results of the trials are shown below:—

Number of persons under trial	...	...	...	215,361
Ditto acquitted or discharged	...	...	...	75,203
Ditto convicted	...	...	...	131,170
Ditto committed or referred	...	...	...	3,422
Ditto who died, escaped or were transferred	...	...	...	264
Ditto remaining under trial at the end of the year	...	...	...	5,302

The percentage of convictions was 63·5, as against 63·3 in 1890.

The following statement furnishes details as to the sentences passed by Magistrates in the districts outside the Presidency town:—

Fine	...	With imprisonment	...	...	4,086
		Without ditto	...	...	95,246
Whipping	...	Sole punishment	...	...	1,194
		Additional ditto	...	...	127
Imprisonment...	...	Rigorous	...	...	26,438
		Simple	...	...	775

The sentences of imprisonment passed may be thus classified:—

Not exceeding 15 days	...	...	4,909
Ditto 6 months	...	...	16,832
Ditto 2 years	...	...	5,349
Exceeding 2 years	...	...	74

Sixty-three juveniles were sentenced to detention in a reformatory school, as against 98 in 1890.

There were 36,496 cases brought to trial before the Courts of the Presidency Magistrates during the year, of which 36,491 were decided, as against 34,981 in 1890. Stipendiary Magistrates decided 27,324 cases, Presidency Magistrates sitting singly 8,527, and benches of Magistrates disposed of 640 cases. The number of persons under trial before the Presidency Magistrates during the year was 49,841, as compared with 46,501 in the previous year. Of the persons under trial, 7,448 were either acquitted or discharged, 42,333 were convicted, 15 died, escaped, or had their cases transferred to other Courts, and 45 were committed to the Sessions. The percentage of convictions was 85·0 of the persons whose cases were decided. Of those convicted, 1,265 persons were sentenced to imprisonment, 74 to whipping, and 39,146 to pay fines. Twelve of those sentenced to fine, and one of those sentenced to whipping, were so sentenced in addition to other punishment; and of the 1,265 persons sentenced to imprisonment, the sentence was, in the case of 11 juveniles, commuted to detention in a reformatory school. In addition to the 1,456 persons shown as sentenced to imprisonment, 14 persons were imprisoned for terms not exceeding one year on failure to furnish security for good behaviour.

During the year, 124 European British subjects concerned in 108 cases were brought to trial in the criminal Courts, as compared with 214 in 155 cases in 1890, and of these 73 were convicted and 50 acquitted, while the case of one person remained pending at the close of the year. Of the 107 cases decided, 102 were tried by European Magistrates and Judges and 5 by Native Magistrates. As in previous years, the most numerous trials were held in Chittagong, where 46 European British subjects were tried, and in Darjeeling, where 24 were tried.

The offences with which European British subjects were commonly charged were breaches of local and special laws (under which 52 persons were charged in 10 districts) and criminal force and assault (under which 33 persons were charged in 11 districts, Darjeeling contributing 9 and Chittagong and Saran 7 each). Besides these, 6 persons were tried for criminal intimidation, insult or annoyance, and 4 were tried for offences affecting life. None of the persons tried during the year claimed a mixed jury, or a trial by assessors of special nationalities.

The number of witnesses examined in the different Courts during the year was 499,722, as against 451,982 in 1890. Of this number, 485,501 were examined by Magistrates, 13,775 by Courts of Sessions, and 446 by the High Court.

The number of persons whipped under judicial orders was 1,424, as compared with 1,250 in the preceding year. The figures for the four preceding years are given below :—

1886	...	1,652
1887	...	1,267
1888	...	953
1889	...	1,350

Statistics of offences and offenders.

The statistics of offences and offenders are fully discussed in the Chapters on Police and Prisons.

The following statement shows the total number of persons who were under trial during the year in the criminal Courts of the Sonthal Parganas and the result of the trials:—

Total number of persons under trial	...	...	6,626
Ditto ditto convicted	...	...	2,876
Ditto ditto discharged or acquitted	...	...	3,237
Ditto ditto committed or referred	...	...	108
Ditto ditto who died, escaped or were transferred	...	...	11
Pending for trial at the end of the year	...	...	394

Of the 2,876 persons convicted, 717 were sentenced to imprisonment, 2,020 to pay fines, and the remainder to whipping or to furnish security for good behaviour or to keep the peace.

The results of the appeals preferred and of the applications for revision made are shown below:—

Appeals or applications rejected	...	...	24
Sentences or order confirmed	...	...	297
Ditto modified	...	...	44
Ditto reversed	...	...	20
Re-trial ordered	...	...	38
Referred for revision to the High Court	...	...	19
Remaining at the end of the year	...	...	22

PRISONS.

THE total number of all classes of prisoners in jails and subsidiary jails, together with corresponding figures for the previous nine years, is shown in the following table:—

	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
Number of prisoners of all classes in jails and subsidiary jails on the last day of previous year ...	16,507	16,693	14,718	15,354	15,076	14,020	13,310	13,783	15,048	16,311*
Total number admitted during the year ...	77,941	74,643	80,302	80,863	77,000	76,064	81,136	84,629	89,869	87,026
Total ...	94,348	90,236	95,020	96,217	92,042	90,303	94,346	98,412	104,917	103,136
Total discharged ...	78,763	76,620	80,214	81,131	78,413	77,083	80,301	85,578	89,869	90,643
Balance at the end of the year ...	16,698	14,718	16,354	15,076	14,629	13,210	13,039	13,048	15,048	16,690
Daily average of all classes ...	14,136	15,086	15,101	15,177	14,968	12,630	13,731	15,990	14,777	15,316

* Two prisoners (one convict and one under-trial) who remained on the 31st December 1890 at the Dum-Dum subsidiary jail, and two convicts who were confined at the Rajmahal Magistrate's hospital on the 31st December 1890, before it was converted into a subsidiary jail, were not accounted for in the statistics for 1890.

The number of admissions during the year was larger than in any other of the past ten years, while the number of prisoners remaining in custody at the end of the year was larger than in any year since 1880. The increase in admissions is spread equally over under-trial prisoners, convicts, and civil prisoners. No satisfactory explanation of this increase has been furnished: there was on the whole no greater scarcity in 1891 than in 1890, and there is no reason to suppose that police activity was greater than in previous years.

Of the total daily average of 14,449 convicts, 53·40 per cent. were confined in central jails, 44·29 in district jails, and 2·31 per cent. in subsidiary jails. The daily average number of convicts in central jails was 7,716, against 7,313 in 1890, and these jails were kept absolutely full throughout the year.

The following table compares the releases under the various heads with the figures for the six previous years:—

	1885.	1886.	1887.	1888.	1889.	1890.	1891.
Released on expiry of sentence	27,379	27,125	21,328	26,453	28,754	28,464	26,873
“ on appeal ...	1,750	1,845	1,908	1,980	1,943	2,038	2,120
“ under remission rules	1,665	1,673	1,017	1,362	1,675	1,622	1,681
“ on medical grounds	22	26	28	33	37	39	105
“ on other grounds ...	75	27	6,484	88	2	9	9

During the year the orders of Government regarding the release of moribund prisoners have been brought into effect, and the number of releases in such cases rose from 39 in 1890 to 105 in 1891. A new rule has since been added to the Jail Code, by which moribund prisoners, who have not been sentenced to imprisonment for a period exceeding seven years for any very heinous crime or series of crimes, may, when they have friends who will be responsible for their safe keeping, be released on the order of the Magistrate of the district, if the unexpired portion of their sentence does not exceed six months, and in other cases on the orders of Government. It has been clearly explained that the change in the rule has been made not with a view to prevent the jail mortality from being unduly swelled, but from motives of humanity, that the prisoner may have the consolation of dying at home. The former rule on this point was that such releases could only be made where the release of the prisoner was reasonably likely to save his life.

The number of transportations from Bengal to the Andamans fell from 157 in 1890 to 90, of whom only 7 were females, during the year under review. There were 37 executions during the year, compared with 26 of 1890 and 17 in 1889.

The total number of Burman convicts confined in the Bengal jails at the close of the year was 387, against 470 remaining at the close of 1890. There were 9 deaths among these convicts, against 15 in the preceding year. Ninety-two were despatched to Rangoon and four were discharged locally, while 22 were received, against 20 in 1890. The number of offences committed by Burman prisoners was 699, as compared with 953 in the previous year, and the number of offences connected with work fell from 452 to 251. This is accounted for by the promotion of a larger proportion of the convicts to be convict warders.

Of the 34,814 convicts admitted direct into jail, 19,872 or 57·08 per. cent. were Hindus, 13,535 or 38·88 per cent. were Muhammadans, and 299 or ·86 per cent. were Christians, the balance being aborigines, Buddhists and Jains. The number of juveniles under 16 years of age admitted to jail was 371 or 1·06 per cent. of total admissions, as compared with 374 or 1·14 per cent. in 1890. The number of prisoners previously engaged in agricultural pursuits rose from 19,021 or 60·47 per cent. in 1890 to 21,282 or 63·44 per cent. in 1891. The number of female convicts admitted direct to jail was 1,265, as compared with 1,431 and 1,503 in 1890 and 1889 respectively.

The number of re-convicted prisoners admitted into jail was 3,226 or 9·26 per cent. of the total number, against 3,331 or 12 per cent. in 1890. Of these, 2,305 had one previous conviction, 558 two previous convictions, and 363 more than two previous convictions. During the year the organization of the anthropometric system for the identification of habitual offenders, which has been made over to the Police Department, made considerable progress, and all the important criminals in the central jails have already been measured. The number of persons sent to jail in default of giving security for good behaviour rose from 1,303 to 1,448.

A steady increase in the proportion of prisoners with short sentences has been noticed for some years; of 15,429 convicts confined in the jails on the 31st of December 1891, 7,993 or 51·8 per cent. had sentences not exceeding one year, as compared with 6,679 or 47·6 per cent. in 1890. Last year it was noticed that in many cases simple imprisonment was ordered where the proper punishment would have been rigorous imprisonment; and during the year under review, while the total number of sentences increased by nearly 2,000, sentences of simple imprisonment fell from 2,557 to 2,472. Attention has been drawn to the very small number of sentences of rigorous imprisonment with solitary confinement, viz., 56 against 30 in 1890. The cells appear to be used almost solely for the purposes of jail punishment, and hardly ever as a part of a sentence. In other provinces this form of punishment is freely used in criminal courts, and there is no reason why it should be otherwise in Bengal. The number of sentences of imprisonment with whipping rose from 90 in 1890 to 95 in 1891. The number of convicts whipped under judicial sentences rose from 1,329 to 1,528, while the number of boys under 16 ordered by judicial courts to be whipped fell from 500 to 458.

The number of under-trial prisoners admitted during the year was 30,304, and there were 1,099 prisoners under trial at the close of the year 1890, against 1,089 at the end of 1891. Of these, 15,036 or 49·6 per cent. were finally convicted. The number of admissions was greater than in any of the preceding ten years. There were 33 escapes during the year among under-trial prisoners. Of these, one was from the intermediate jail at Malda, and the rest from subsidiary jails. Of the escaped prisoners, nine remained uncaptured at the end of the year.

The average period of detention in Sessions cases for the whole Province was 49·96 days, as compared with 45·88 days in 1890. Of the 16 districts with the worst average in this respect, all but two are under a Judge who also holds Sessions in another district. The average detention in cases before Magistrates fell from 13·28 days in 1890 to 11·96 days in 1891.

There were 73 civil prisoners in confinement on the last day of 1890, and the number of admissions during 1891 was 1,089, against 969 in 1890. Of the total number, 15 were transferred, 1,074 were released, and 2 died of cholera.

Three Lushai chiefs sent down by the Assam Government were received in the Hazáribágh Jail. Two of these men committed suicide by hanging themselves with ropes made from their clothing. The remaining chief was in jail at the close of the year, and was in good health. Twenty-one prisoners from Manipur passed through the Alipore Jail on their way to the Andamans.

The total expenditure during the year was Rs. 2,03,705, of which Rs. 1,35,190 were spent on original major works.

Jail buildings.

In future years the Inspector-General will receive a fixed grant for original works, which has been fixed at Rs. 1,00,000 for the year 1892. Within these limits the selection of the most urgent among the works which have received administrative sanction will be made by the Inspector-General at his discretion. The subject of jail buildings is one to which great attention has been paid during the year. There has been some unnecessary expenditure on jail construction in Bengal, and especially in subsidiary jails, due to the prevalent conviction that all jail buildings must be of masonry work. For the subsidiary jails, which on an average contain four convicts and six under-trial prisoners, the cost of construction on the standard plan has been from Rs. 15,000 to Rs. 20,000 apiece, and the expenditure during the past year was Rs. 64,272. Not only are the surrounding walls and the sleeping barrack high and of masonry, but the very workshop under which the oil-mill stands, the sheds for warders, and even their cooking sheds must also be of masonry work. Expenditure has thus increased through the mistaken belief that it is cheaper to build with brick and avoid subsequent repairs, whereas in fact the more interest on the cost of a *pucka* building is often equal to the whole cost of a *cutchá* one, and in all cases exceeds the cost of the annual repairs to the latter. In these respects the Government has spared no effort to introduce a more economical spirit.

The total strength of the warder-guard now stands at 1,607 men of all grades. The system by which a small monthly

Guards.

sum is deducted as security from the salary of each warder was continued during the year, and is reported to have an excellent effect on the men. The new organization by which every warder on first appointment in the department has to serve in a central jail, was worked throughout the year with success, and it is reported that this arrangement has improved, and will, in future, very materially improve the discipline and efficiency of the warder guard. The loss of efficiency in the guards of central jails which might be expected to result from this system has, as far as possible, been avoided by keeping the best warders of the higher grades at the central jails, and by insisting that before admission to the permanent establishment at a central jail, every warder shall have undergone a period of training and probation as an apprentice on subsistence allowance in a district jail.

There were 21 escapes of convicts, as compared with 13 in 1890. Of these,

Escapes.

two were from central jails, seven from district jails, four from intermediate jails, and eight from subsidiary jails. Fifteen of the 21 were recaptured during the year, besides four who had escaped in previous years. These figures in connection with the daily average convict population of jails and subsidiary jails are thus compared with the figures of other provinces :—

Province.	1889.		1890.		1891.	
	Convict population.	Escapes.	Convict population.	Escapes.	Convict population.	Escapes.
Bengal	13,601	11	13,447	13	14,449	21
Assam	1,376	30	1,327	20	1,218	31
North-Western Provinces and Oudh	23,264	13	23,493	27	23,126	20
Punjab	12,243	25	11,843	19	11,645	16
Bombay	6,969	43	7,018	14	6,976	28
Madras	7,419	49	7,964	23	8,581	45
Burma	8,614	3	10,361	4	11,064	12
Central Provinces ...	4,343	4	4,265	16	4,451	14

The number of offences committed by prisoners was 26,459, against 25,700 in 1890. The ratio of punishments to the daily average jail population fell from 191·1 per cent. in 1890 to 183·1 in the year under review. The following table gives the statistics of punishments during the past seven years:—

YEAR.	Cour. By Cri.	BY JAIL OFFICERS.					To Jm.	Ratio per cent. of total punishments to daily average number of prisoners.	Ratio per cent. of cor- poral punishment to total number of all other punish- ments inflicted on male prisoners.
		Solitary confinement.	Reduced diet.*	Solitary confinement with reduced diet.	Corporal punish- ment.	All other punish- ments.			
1885 ...	71	3,333	2,498	472	347	42,081	49,790	354·66	0·73
1886 ...	44	2,504	1,015	499	396	36,046	40,504	309·93	1·01
1887 ..	44	1,599	509	251	266	33,095	35,821	328·41	0·76
1888 ...	29	1,295	525	352	245	28,808	29,054	234·71	0·86
1889 ...	40	1,270	583	318	272	22,841	25,110	184·76	1·12
1890 ..	28	1,270	430	194	259	23,576	25,007	191·10	1·04
1891 ...		1,276	798	168	291	23,946	26,456	183·10	1·13

* Including convicts put on penal diet.

The total number of prisoners employed during the year as convict officers was 1,986, and the ratio per cent. of the average number of prisoners so employed was 5·80 for males and 0·37 for females. The number of convict officers punished was 1,580, as compared with 1,629. Out of 1,661 prisoners released during the year, who were on the mark system, only nine failed to gain remission under it.

Expenditure.

The gross expenditure of the Department for the last ten years is shown in the following table:—

	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
General supervision	49,181	43,969	47,078	44,207	40,236	40,198	50,321	49,344	49,800	48,520
Dieting prisoners	3,06,138	3,16,649	3,57,513	3,03,384	3,34,067	2,44,730	2,94,084	3,89,360	3,54,107	3,63,690
Establishment (ex- cluding the police)	4,25,511	4,34,276	4,30,163	4,42,463	4,57,417	4,09,884	4,44,698	4,51,449	4,40,777	4,47,812
Hospital charges ...	43,300	40,947	39,237	40,363	42,399	34,604	40,890	54,825	47,793	49,156
Clothing ...	64,480	59,427	59,514	69,734	69,051	44,272	58,304	70,008	64,357	55,806
Miscellaneous con- tingencies ...	88,215	95,029	90,341	1,03,226	1,02,139	98,915	1,28,892	1,47,911	1,47,731	1,66,790
Retty construction and repairs ...	21,440	19,494	21,715	27,717	29,933	37,804	25,849	29,003	29,009	31,006
Police ...	50,346	8,700	...	...	...	...	...	...	...	...
Stationery ...	2,068	1,481	840	2,866	1,803	1,403	1,276	1,321	1,440	1,215
Medical stores ...	6,013	4,748	5,000	7,845	6,262	6,859	8,390	3,845	2,020	1,945
Total ...	10,36,213	10,32,025	10,84,400	11,16,423	10,85,361	9,68,053	12,08,101	11,91,149	11,97,927	11,83,530
Daily average popu- lation of all classes	16,183	16,000	15,191	15,176	14,808	12,250	15,731	15,083	14,777	15,915
Average expenditure per prisoner ...	Rs. 1. 7.	Rs. 1. 7.	Rs. 1. 7.	Rs. 1. 7.	Rs. 1. 7.	Rs. 1. 7.	Rs. 1. 7.	Rs. 1. 7.	Rs. 1. 7.	Rs. 1. 7.
	04 3 3	08 11 7	00 10 4	70 3 0	75 13 8	78 0 4	77 13 8	79 4 5	76 6 5	75 3 0
Public Works De- partment ...	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
	10,10,780	5,07,718	1,02,739	69,037	98,894	1,88,369	2,40,344	2,97,814	1,84,210	2,63,708

The increase under diet, hospital charges, clothing, and contingencies is accounted for by the increase in jail population. The decrease in the average cost per prisoner under all heads, excluding public works, from Rs. 79-4-5 in 1889 and Rs. 76-6-3 in 1890 to Rs. 73-3-9 in the year under review, is satisfactory, and the jails have, as a rule, been managed with economy and forethought.

The average prices paid for the principal articles of diet during the past two years are noted on the margin, and show that by a judicious use of the system of buying the bulk of the cereals required at the cheapest season of the year, it has been possible, in a year of exceptionally high prices, to keep the rates almost down to what they were the previous year. The expenditure per prisoner for diet in each jail compared with the expenditure of the previous year is shown in the following table:—

	1891.			1890.		
	Rs.	A.	P.	Rs.	A.	P.
Rice ...	2	1	9	2	2	7
Wheat (flour) ...	3	1	7	2	15	4
Maize ...	2	0	0	1	12	9
Dal ...	2	7	8	2	8	4
Meat ...	6	6	7	6	2	2
Fish ...	6	4	8	6	11	10
Salt ...	3	12	6	3	15	2

JAILS.	1891.			1890.			JAILS.	1891.			1890.		
	Rs.	A.	P.	Rs.	A.	P.		Rs.	A.	P.	Rs.	A.	P.
Presidency— <i>Europeans</i>	79	4	6	87	13	0	Faridpur ...	20	15	2	23	12	9
Darjeeling ...	26	2	4	35	15	1	Buxar— <i>Central</i> ...	20	14	6	21	3	9
Naya Dumka	29	14	0	...	...	...	Rangpur ...	20	10	6	21	5	8
Midnapore ...	28	1	1	28	8	2	Khulna ...	20	6	6	21	9	9
Alipore ...	26	3	2	27	14	6	Cuttack ...	20	2	3	21	11	2
Murshidabad	24	14	6	25	3	7	Patna ...	19	13	4	16	14	3
Bladgaipur ...	24	11	0	22	13	9	Balasore ...	19	13	2	21	10	1
Palna ...	21	6	3	23	11	8	Hooghly ...	19	12	2	21	4	2
Presidency— <i>Native</i>	23	14	9	28	0	6	Bogra ...	19	8	4	18	6	8
Chittagong ...	23	12	10	26	1	3	Manbhum ...	19	5	3	18	11	1
Mymensingh	23	12	6	28	2	2	Birbhum ...	19	3	10	20	10	3
Rajshahi ...	23	12	6	24	11	3	Dinajpur	19	0	3	18	5	5
Champanan ...	23	12	0	21	9	3	Lohardaga	18	6	2	17	6	8
Palamau ...	22	11	1	25	0	2	Hazáribagh	18	2	11	19	10	11
Shuhabad ...	23	8	11	17	13	1	Saran ...	18	0	9	17	5	8
Dacca ...	23	6	0	25	2	6	Monghyr	16	15	10	17	1	3
Singbhum ...	22	4	6	22	1	1	Purnea ...	16	8	0	16	9	6
Noakhali ...	22	2	10	23	9	6	Puri ...	16	7	6	17	9	2
Burdwan ...	21	15	11	23	11	6	Malda ...	16	2	9	15	1	1
Muzaffarpur	21	15	8	19	15	6	Bankura ...	13	2	9	14	6	8
Darbhanga ...	21	13	10	20	3	0	Gaya ...	12	8	8	16	8	3
Backergungo	21	0	10	21	0	1							
Jalpaiguri ...	21	5	6	19	4	6	Total ...	22	12	10	23	15	6
Tippers ...	21	4	10	23	3	6							
Jessore ...	24	0	8	24	6	4	For 1889 ...	25	14	7			
Nadia ...	20	15	8	24	9	8							

The whole of the vegetables consumed by prisoners during the year were grown in the jail gardens, except in the case of the Midnapore and Mymensingh jails, which purchased vegetables to the value of Rs. 210 and Rs. 58 respectively. All condiments used for the diet of convicts were also grown in the jail gardens. The total of the value of vegetables and dairy produce sold, Rs. 72,831, compares most favourably with the figures of 1890 (Rs. 53,747) and 1889 (Rs. 47,827). This remarkable increase is reported to be largely due to the development of jail dairies, which supplied the jails during the year with milk to the value of Rs. 13,517. By the establishment of these dairies a supply of milk of undoubted purity is obtained at a very small cost to Government, which not only reduces considerably the cost of diet throughout the jails, but is invaluable in cases of sickness.

Expenditure under the head "Establishment" in jails other than subsidiary jails rose from Rs. 3,78,895 to Rs. 3,84,825: hospital charges rose from Rs. 47,437 to Rs. 48,751: the value of clothing supplied increased from Rs. 53,667 to Rs. 55,444, and the expenditure on contingencies was Rs. 1,47,722 against Rs. 1,29,089. The total average cost per prisoner on account of diet, hospital charges, and clothing together, which amounted to Rs. 34-13-11 in 1889 and Rs. 31-3-5 in 1890, was further reduced to Rs. 29-11-9 in 1891. The jails of Malda and Gaya show the best results. Buxar was as usual the cheapest central jail.

From what the Lieutenant-Governor has seen on his tours of inspection, he is persuaded that the jail policy of the past few years has tended, while taking special care of the health of the prisoners, rather to the neglect of the punitive

side of imprisonment; that is, the labour question. In several jails His Honour found that prisoners were altogether insufficiently worked.

Experiments have been made by Dr. J. H. T. Walsh, Medical Officer of the Presidency Jail, on the effect of exercise and enforced labour on weakly constitutions. The following is an extract from his report on the subject:—

“As the outcome of this forced muscular waste, there is increase in tissue hunger and tissue respiration, which allows, and indeed compels, the patient to take in and digest large quantities of food; thus causing increase of weight and great improvement in muscular vigour and health generally. From such cases as are here alluded to it is only a step to those in which the patient, though in poor health, is able to move about and use his limbs. It must be understood that I exclude from the category of persons suitable for these experiments all those suffering from marked organic disease of the heart, lungs and kidneys. The starved, the anæmic and the dyspeptic form a very large proportion of all jail populations, especially in Bengal, where the standard of health is low. As a rule such subjects, when punished by imprisonment, have been allowed to do very trifling task, and have been, so far as production is concerned, practically placed among the sick. During the year 1891 I selected 129 such cases and placed them on hard work with the following results:—121 improved in health and gained weight, 2 lost weight and had to be kept on light work, 2 being somewhat old were ultimately placed in the convalescent gang, as much improvement could not be hoped for in such persons, 2 neither lost nor gained; and finally, of all these weakly persons only two are registered as having been admitted into hospital. One of these was admitted for periostitis, not in any way caused by the work he was doing. The second man was placed on hard work, *dhenki*, on the 30th November. He then weighed 88½ lbs. He worked on until the 21st December and weighed 90 lbs. He then got diarrhoea and was admitted into hospital. All the men selected were admitted in ‘bad’ or ‘indifferent’ health, and all these cases have been kept carefully under observation by the Civil Hospital Assistant and by me, and a register has been kept showing the weekly gain or loss in weight. I must point out that for the first week or so a full task must not be expected, and also that some forms of labour are much better to begin with than others. I have generally commenced with the *dhenki* or with *dāl-grinding*, passing on afterwards to *wheat-grinding*, *hand-press* or *oil-mill*. It is hardly necessary to mention that the convicts do not show any desire to assist in these beneficial experiments, and in some cases it has required firmness in insisting on the tasks being performed.”

The results of Dr. Walsh’s experiments seem to be of much importance. While great improvement has taken place in the mortality ratio, the importance of which cannot be overrated, the generality of Superintendents of jails are reluctant to enforce a proper amount of work on the part of the prisoners, for fear that such work should have a prejudicial effect on their health. The above observations on the health-giving effects of moderate labour, which agree with those of the Famine Commission in the case of starving people, are therefore most valuable, and should be known as widely as possible.

Orders have been issued for the employment, as far as possible, by the Public Works Department, of prisoners for such works as brick, tile, and surki manufacture, coolie labour to assist skilled workmen, earthwork of all kinds, and stone and brick breaking; and it is hoped that by this means the valuable labour-supply contained in the jails may be turned to greater profit than has hitherto been the case.

The average number of prisoners under sentence of labour was 14,230, against 13,241 in 1890; of these an average number of 729 were employed on unremunerative labour, as compared with 491 in 1890;

The profit on the manufacturing account during the last two years is as follows:—

		1891.	1890.
		Ra.	Ra.
Cash drawn from the treasury	...	8,91,321	8,84,267
Cash paid into the treasury	...	12,05,342	10,35,109
Difference or profit	...	3,14,021	1,50,842

The average profit per head from each labouring prisoner was Ra. 52-7, against Ra. 28-3 in the previous year.

The number of subsidiary jails remains unchanged at 86. Of these only

Subsidiary jails.

9 were visited less than 70 times by the Superintendents, and there was an improvement throughout

in the number of visits paid to these jails compared with the results of previous

years. The total amount expended on subsidiary jail buildings was Rs. 64,272, compared with Rs. 63,872 in 1890. The daily average number of convicts and under-trial prisoners in these 86 jails was 332·84 and 515·03, respectively, or a little less than four convicts and six under-trial prisoners to each jail. Of the 40 prisoners who escaped from subsidiary jails, eight were convicts, and of these five were recaptured. Of the 32 under-trial prisoners who escaped, 23 were recaptured.

The total cost of the subsidiary jails was Rs. 1,73,235, or, excluding public works, Rs. 128-6-9 per prisoner, compared with Rs. 1,70,110 and Rs. 131-8-8, the corresponding figures for 1890. The total credits from manufactures in subsidiary jails amounted to Rs. 20,815, with a net profit of Rs. 3,198, against Rs. 19,340 and Rs. 3,127 in 1890.

The following table shows the sickness and mortality of the jails for every year from 1863 onwards:—

Years.	Daily average number of prisoners.	Daily average sick.	Ratio per mille of daily sick.	NUMBER OF DEATHS—			DEATH-RATES PER MILLE OF AVERAGE STRENGTH—			REMARKS.
				From cholera.	From all other causes.	Total number of deaths.	From cholera.	From all other causes.	From all causes.	
1863	16,453	847	51·4	338	1,223	1,561	20·6	74·2	94·8	All classes of prisoners.
1864	16,729	814	48·6	231	804	1,035	13·8	48·0	61·8	
1865	17,439	766	43·3	162	790	952	9·2	45·3	54·5	
1866	20,683	746	54·6	684	1,669	2,223	33·0	74·0	107·0	
1867	18,733	608	35·6	162	916	1,078	9·0	49·0	58·0	
1868	18,061	646	35·7	122	802	924	7·0	44·0	51·0	
1869	18,476	676	36·6	176	771	947	9·0	42·0	51·0	
1870	16,546	623	37·6	171	659	830	9·0	36·0	45·0	
1871	17,600	636	36·3	38	661	699	2·0	38·0	40·0	
1872	19,106	673	35·2	117	666	1,002	6·0	46·0	52·0	
1873	20,142	689	34·2	128	832	960	6·0	41·0	47·0	
1874	21,569	782	36·2	145	1,027	1,172	7·0	47·0	54·0	
1875	21,267	836	39·2	96	949	1,045	4·0	45·0	49·0	
1876	21,672	849	39·1	267	976	1,243	12·3	45·0	57·3	
1877	18,709	730	39·0	151	769	914	8·0	40·8	48·8	
1878	18,011	803	43·1	216	1,072	1,287	11·5	67·6	69·1	
1879	18,483	947	51·2	341	1,411	1,752	18·4	76·4	94·8	Convicted and under-trial only.
1880	17,802	941	52·8	31	1,100	1,131	1·7	61·8	63·5	
1881	16,530	872	52·8	86	1,014	1,099	5·1	61·4	66·6	
1882	15,902	849	53·3	161	993	1,084	9·6	58·6	68·1	
1883	14,776	729	49·3	64	701	762	4·1	47·4	51·5	
1884	14,868	724	48·6	62	678	740	4·1	45·8	49·7	
1885	14,928	773	51·7	167	730	887	10·6	48·9	59·4	
1886	14,679	648	44·4	40	603	643	2·7	34·6	37·2	
1887	12,047	639	44·7	20	379	399	1·7	34·4	36·1	
1888	13,034	631	48·2	122	482	614	0·7	35·3	36·0	
1889	14,971	696	46·4	122	656	677	8·8	37·0	45·8	
1890	14,706	690	39·4	33	443	476	2·2	30·1	32·3	
1891	16,839	610	36·6	62	499	491	3·2	27·7	30·9	
Total	502,738	21,312	42·3	4,600	24,084	28,534	8·9	47·8	56·7	
Average	17,396	736	42·3	166	829	984	8·9	47·8	56·7	

The death-rate is 1·4 below that of last year, which was itself the lowest on record—a result which is most satisfactory and should encourage Superintendents of Jails to continue their exertions in the direction of improved sanitation.

The jails in which the ratio of admissions to hospitals per mille of average daily population was highest were Purnea 99·8, Dinajpur 91·8, Chittagong 82·9, Dacca 72·7, Jalpaiguri 67·8, and Champaran 67·7. There were 81 cases of cholera with 48 deaths, against 55 cases and 31 deaths in the previous year. Only seven cases of small-pox occurred. These were mostly of a mild type, and only one case terminated fatally. There were 23 admissions from cerebro-spinal fever, of which 80 ended in death; twelve cases and eleven deaths occurred in the Alipore Jail, six with four deaths at Bhágalpur, and five with three deaths at Rangpur.

The total number of deaths was 454. Of these, 444 occurred in jails other than subsidiary jails. Out of these 444 convicts who died during the year, only 150 were originally admitted to jail in good health. The following jails show the highest mortality:—

JAILS.	Death-rates from all causes per mille.		Death-rates exclusive of cholera per mille.	
	1891.	1890.	1891.	1890.
Purnea	131.2	22.3	131.2	22.3
Shahabad	104.9	148.1	21.0	15.6
Rangpur	94.3	86.8	62.7	86.8
Puri	91.2	27.7	75.0	27.7
Dinajpur	88.3	71.7	88.3	71.7
Saran	62.2	65.8	49.9	32.9
Jessore	65.9	43.3	45.9	43.3
Paláman	44.9	27.5	44.9	27.5
Muzaidárpur	43.6	34.7	39.6	34.7
Chittagong	42.9	22.1	26.8	22.1
Jalpaiguri	42.8	114.0	42.8	99.8
Lohardaga	42.1	27.3	42.1	27.3

There were twelve deaths in the Purnea Jail, six being those of prisoners who were brought to jail in bad health, and were sent at once to hospital, where they died a few days afterwards. In this jail 67 other cases had to be taken to hospital directly on their admission, and the general health of the district was exceedingly bad during the year. The high death-rate at Shahabad has resulted entirely from an epidemic of cholera, to which 12 deaths were due. Apart from this the death-rate was 21 per mille. In the Rangpur Jail there were six deaths from cholera, and in this jail out of 23 prisoners who died, 12 were admitted in bad health, 10 in indifferent health, and only one in good health. The Puri Jail is a small one, and a high death-rate is accidental, and due to six deaths from various causes. The Dinajpur Jail is situated in a notoriously unhealthy district, and of the 15 convicts who died in it, nine were admitted in indifferent health and four in bad health. In Saran there were five fatal cases of cholera. The Inspector-General of Jails has been directed to take steps for the appointment of a Committee to enquire into the sanitary condition of the Purnea, Rangpur, and Dinajpur jails.

The average daily number of boys in the Alipore Reformatory rose from 116 in 1890 to 142 in 1891. There were 38 admissions during the year, and 21 releases and 2 deaths.

The average number of punishments to each boy fell from 1.02 in 1890 to 0.66 in 1891, and the offences for which they were imposed are reported not to have been of a serious character. This, in view of the large increase in the number of boys, is very satisfactory.

The average number entitled to marks fell from 89.73 to 82.16, and the weekly average money reward from Rs. 3.9-5 to Rs. 3.2-9. The average number of admissions to hospital was 2.52, against 2.78 in 1890. There were two deaths, one from cholera and one from accidental poisoning, due to drinking an antiseptic solution under the idea that it was brandy. The Civil Hospital Assistant, through whose carelessness the accident occurred, was censured, and removed from the charge of the Reformatory Dispensary. Three boys escaped from the Reformatory on the 8th April 1891 by scaling a wall, but were recaptured within a few days.

Quarters for the Civil Hospital Assistant were added to the Reformatory during the year, but no other building of importance was undertaken. The arrangements for the work and recreation of the boys continued the same as in past years. An hour's gymnastics has recently been introduced into the day's routine, but sufficient time has not yet elapsed to make any estimate of its effects possible.

Reports regarding 65 boys were received from Magistrates during the year. Of these 11 had been reconvicted, two bore a bad character, two had died, and

50 bore a good character. Out of 242 boys released since the opening of the institution, 37 have been reconvicted, 41 have been reported as bearing bad characters, and 164 as bearing good characters. Only 27 follow the trade learnt in the Reformatory.

The total expenditure of the school rose from Rs. 13,988-8-4 in 1890 to Rs. 15,776-5-6 in 1891. The average cost per head fell, however, from Rs. 119-9 to Rs. 111-1-6. The average expenditure per head on fixed establishment and diet fell from Rs. 71-10-8 and Rs. 33-11-3 to Rs. 61-10-10 and Rs. 32-10-3 respectively. These reductions are satisfactory, but the cost of diet is still unduly high.

The profits of the manufacturing department amounted to Rs. 10,235-12-5, against Rs. 9,001-13-4 in 1890.

Arrangements have recently been made by which selected boys will be instructed in the technical work of printing, such as setting up and distributing type, the printing work of the institution having hitherto been confined to the purely mechanical processes. It has also been arranged that some of the Burmese convicts in the Alipore Jail should instruct the boys in wood-carving. These arrangements were not, however, brought into effect during the year under review.

The daily average number of boys in the Hazáribágh school was 296-10, against 280-7 in 1890. Seventy-eight boys were admitted during the year, 67 were released, and one died. Discipline was on the whole good, and only 219 punishments were inflicted, against 308 in 1890. A serious attack was, however, made on the Deputy Superintendent by two of the boys, instigated by a prisoner sent from the Bhágalpur Jail to teach carpet-weaving. The Deputy Superintendent was fortunately able to defend himself successfully, and the offenders were suitably punished. The daily routine of the school is the same as in previous years. The monthly average number of boys earning marks was 270-5, and the average weekly earning Rs. 10-1-4. The corresponding figures for last year were 273-66 and Rs. 10-11-11. The year was an exceptionally healthy one—there were only 58 admissions to hospital and one death—and the daily average number of sick was only 2-54.

The total expenditure of the school was Rs. 83-3-9 per head, against Rs. 75-4-11 in 1890, or, omitting outlay on building, Rs. 70-8-5 against Rs. 69-5-7. There was an increase in the expenditure per head under all the three controllable items of expenditure—diet, clothing, and contingencies. The average expenditure per head on diet was Rs. 27-15-9, against Rs. 25-11-5 in 1890. It is hoped that greater economy will be exercised in future by a judicious storing of food-grains at harvest time. A workshop and 25 cells were built during the year. The results of the working of the Manufacture Department were that the amount paid into the treasury was Rs. 3,979-8, and the value of goods supplied to the general and the other departments was Rs. 4,435 and Rs. 2,900-3-4 respectively, while the total profits amounted to Rs. 2,681-2-9.

Reports regarding 90 boys released from the school were received during the year from Magistrates of districts. Of these 59 were reported as well-conducted, five were in jail, five were viewed with suspicion, and one had died; only one boy was reported as pursuing the trade learnt in the school.

Civil Justice.

THE number of civil suits, including Divorce, Vice-Admiralty, Testamen-
High Court, Original Jurisdic- tary and Intestate (Contentious) cases, pending on
tion. the Original Side of the High Court at the end of
1890 was 563, and the number instituted during 1891 was 632, making a total
of 1,195 cases for disposal in 1891.

Suits decided.			The number of suits decided in 1891 was	
	Decided.	Pending at the close of the year.	462, and the number left undisposed of at the end of the year	
Original suits, including Vice-Admiralty, Testamen- tary and Intestate (Contentious) cases ...	459	718	733.	
Divorce suits ...	3	16		

THE number of appeals from the Original to the Appellate Side of the
Court pending at the commencement of 1891 was
Appeals from the Original Juris- 11, and 28 new appeals were preferred during the
diction. year, making a total of 39 for hearing. Of these
seven were decided, the decrees of the Court of First Instance being affirmed
in six cases and reversed in one.

THE total number of original suits instituted and decided in the Civil
Courts of the Lower Provinces subordinate to the
High Court during each of the past three years
and the number pending at the close of those years
respectively are shown below:—

Year.	Revived or received on remand or review.	Instituted.	Determined.	Pending.
1889 ...	9,741	467,021	461,298	83,298
1890 ...	10,051	456,463	462,225	87,611
1891 ...	10,964	477,400	485,213	90,765

THE number of suits instituted shows an increase of 20,937 as compared
with the number in 1890, and is also considerably in excess of the number
instituted in any previous year. Of the suits remaining undisposed of, 1,846
had been pending for more than one year, 4,991 for more than six months, and
31,082 for more than three months, the corresponding figures for 1890 being
1,391, 5,916, and 32,027.

THE decrease in the number of cases instituted in the Provincial Courts
of Small Causes which was noticed in the
Reports for 1888, 1889, and 1890, con-
tinued in 1891. In the ordinary Civil
Courts, however, suits of the same class
show an increase of 21,490.

THE following statement shows the number of suits of each class
instituted in the Civil Courts during 1890 and
1891:—

	1890.	1891.
Suits for money or movables ...	230,343	250,478
Suits under the rent law ...	187,451	189,986
Title and other suits ...	38,669	36,936

The following statement classifies the suits other than rent suits and suits cognizable by a Small Cause Court instituted during the past two years:—

Classification of other suits.	Number of suits.		Percentage of the class to the total number.	
	1890.	1891.	1890.	1891.
Suits for immovable property ...	21,496	20,420	55.59	55.29
Suits for declaratory decrees... ..	1,157	1,292	2.99	3.50
Other suits under the Specific Relief Act ..	7,441	7,165	19.24	19.40
Suits to declare and establish rights to real property.	4,878	4,604	12.62	12.46
Suits to declare and establish personal rights.	290	276	.76	.75
Suits for an account	941	886	2.43	2.39
Suits relating to religious endowments ...	31	25	.08	.06
Suits to set aside judgments, &c., on the ground of fraud.	554	534	1.43	1.45
Suits for dissolution of marriage ...	36	42	.09	.12
Suits for enforcement of matrimonial rights	544	481	1.42	1.30
Suits for partition	601	562	1.55	1.52
Suits relating to shipping ... ..	...	...	...	...
Suits relating to religion and caste ...	14	7	.03	.02
Administration suits	12	11	.03	.03
Interpleader suits	4	3	.01	.01
Dissolution of partnership	20	8	.05	.02
Suits under section 261, Act X of 1865 ...	294	353	.76	.96
Other suits not falling under any of the previous heads.	356	267	.92	.72
Total	38,669	36,936	100.	100.

The following statement shows the average value of suits of each class:—

Average value of suits.		1890.	1891.
		Rs.	Rs.
Suits for money Small Cause Courts or movables. Ordinary Courts		65.5	65.1
Suits under the rent law		119.2	114.08
Title and other suits		51.6	50.6
		528.03	716.2

The following statement shows the number of applications for the execution of decrees which resulted in full or partial satisfaction together with the total amount realised in the regular Civil Courts:—

		Complete.	Partial.	Amount realised.
				Rs.
1889	...	93,044	65,375	1,58,04,530
1890	...	96,982	62,258	1,58,23,392
1891	...	103,449	69,137	1,79,16,720

The corresponding figures for Small Cause Courts during the past two years are as follow:—

		Complete.	Partial.	Amount realised.
				Rs.
1890	...	3,834	6,209	3,41,590
1891	...	4,039	7,683	3,44,174

The number of suits instituted and decided in the Presidency Court of Calcutta Small Cause Court. Small Causes during 1890 and 1891, as also the number pending at the close of each of these years, are shown below:—

		Instituted.	Decided.	Pending.
1890	...	26,117	26,510	2,203
1891	...	26,054	26,821	1,761

The total amount in litigation was Rs. 26,39,913 in 1891, as compared with Rs. 23,47,875 in the previous year.

The total number of cases instituted and decided in the Provincial Small Cause Courts during the past two years, as well as the number pending at the close of each, are shown below:—

		Instituted.	Decided.	Pending.
1890	...	43,794	44,402	3,861
1891	...	42,439	42,568	2,647
Difference	...	—1,355	—1,834	—1,214

Of 108,567 cases decided by officers vested with the powers of a Small Cause Court, as described on the margin,

1 Munsif with jurisdiction up to	...	Rs. 25
123 Munsifs ditto	...	50
56 Dn. ditto	...	100
4 Sub-Judges up to	...	100
7 Ditto ditto	...	500

Of cases of a similar nature instituted before officers not vested with the special powers of a Small Cause Court, 25,554 were below Rs. 50 in value, and 64,505

above Rs. 50 and below Rs. 500.

The statement on the margin shows the number of appeals under section 15

High Court, Appellate Jurisdiction.

		Filed.		Decided.	
		1890.	1891.	1890.	1891.
First appeals	...	28	28	43	7
Second ..	...	...	...	...	...
Third ..	...	17	7	35	11

of the Letters Patent preferred against the decrees or orders of a Judge of the High Court sitting alone, either on the Original or on the Appellate Side of the Court, and decided in

the years 1890 and 1891, respectively.

The number of first appeals before the High Court in 1891 from the decrees or orders of one of the Judges in the exercise of original jurisdiction was 39, inclusive of 11 pending from the previous year. Of these, 7 were decided and 32 remained unheard at the close of the year.

The number of first and second appeals from the decrees and orders of the

Appeals to High Court from subordinate courts as courts of first instance.

		Preferred to the Court.		Decided.	
		1890.	1891.	1890.	1891.
First appeals—					
From decrees	...	336	366	367	327
From orders	...	190	203	202	172
Second appeals—					
From decrees	...	1,879	2,040	2,932	2,093
From orders	...	132	189	171	134

Civil Courts as Courts of appeal which came before the High Court, and were decided during the past two years, are shown on the margin. These figures include appeals from the Courts of Assam and the Chief Court of British Burma. Of the first appeals preferred during 1891, 87 were appeals in contested will cases.

Two thousand seven hundred and twenty-six appeals from subordinate courts were decided by the High Court during the past as compared with 3,692 during the previous year.

Eighty-two appeals from original decrees, 328 appeals from appellate decrees, and 45 miscellaneous appeals were either summarily rejected, dismissed on default, with-

drawn or compromised, as shown below:—

		Appeals from original decrees.	Appeals from appellate decrees.	Miscellaneous appeals.
Summarily rejected	...	...	255	16
Dismissed on default	...	23	31	6
Withdrawn	...	17	11	9
Compromised	...	42	31	14
Total		82	328	45

The results of appeals as affecting the decisions of the lower Courts in the cases heard and determined are shown below :—

	Appeals from original decrees.	Appeals from appellate decrees.	Miscellaneous appeals.
Affirmed	149	1,346	192
Reversed	42	119	37
Varied	30	82	4
Remanded	24	218	28
Total	245	1,765	261

The decisions of the lower Courts were reversed or varied in 29·3 per cent. of the appeals from original decrees, in 11·3 per cent. of the appeals from appellate decrees, and in 15·7 per cent. of the miscellaneous appeals.

The following table shows the results of the appeals decided by the High Court as affecting District Judges, Sub-Judges, and Munsifs :—

	Affirmed.		Modified or reversed.		
	District Judges.	Sub-Judges.	District Judges.	Sub-Judges.	Munsifs.
Appeals from { Original decrees	51	98	21	40	2
{ Appellate "	476	876	132	69	..
Miscellaneous appeals	116	76	17	24	..

The proportion of cases in which orders of remand were passed, or in which the lower Court was directed to take further evidence, to the total number decided by the High Court after hearing, is given on the

	Percentage.		
	1889.	1890.	1891.
Appeals from { Original decrees	6·15	6·08	9·7
{ Appellate "	11·31	6·4	12·3
Miscellaneous appeals	6·02	6·72	10·7

The number of appeals in regular suits instituted and decided in the lower Courts during the past three years, as also the number pending at the close of each, are shown below :—

Year.	Revived or received on remand or review.	Instituted.	Decided.	Pending
1889	514	19,304	19,505	11,789
1890	478	19,991	18,185	13,762
1891	511	49,862	20,118	13,998

The number of appeals instituted was slightly less than in 1890, but greater than in any previous year since 1877. The number decided shows an increase of 1,633.

Out of 13,998 appeals pending at the close of the year, 1,516 had been before the Courts for more than one year, the majority of these being appeals in title suits.

There were also at the same time 3,608 rent and title suit appeals pending for over six months, and 4,995 appeals of all classes pending for over three months.

Civil Justice, Southal Parganas.—The following statement shows the work done during the years 1890 and 1891 :—

	Cases instituted.	Disposed of.	Pending at close of year.
Civil suits	{ 1890 8,765	8,941	1,397
	{ 1891 8,668	8,708	1,357
Miscellaneous judicial cases	{ 1890 430	413	26
	{ 1891 447	448	25
Execution cases	{ 1890 5,500	5,603	1,326
	{ 1891 5,256	5,240	1,342

The total number of cases of all kinds instituted thus fell to 14,371 from 14,704 in 1890, which year also showed a large falling off in institutions compared with the years 1888 and 1889. The number of cases disposed of also fell from 14,957 to 14,396.

The number of these suits shows a slight increase from 4,577 in 1890 to 4,669 in 1891. The increase was almost entirely confined to the Dumka subdivision, and is said to be due to a new class of cases, viz., those brought by *parganails* for their '*hak*.'

In this class of cases there was an increase from 2,004 to 2,218, and again the increase was almost entirely in Dumka, where the number of cases rose from 371 to 696. The number instituted in 1889 was 602, so that it is probable that, as explained by the local officers, last year's figures were abnormally low owing to the census operations. There was a moderate increase in the number of rent suits instituted in Godda, and a falling off in the other four subdivisions, especially in Deoghur.

These cases show a decrease of 343—from 2,124 to 1,781. This decrease occurred in every subdivision of the district except Rajmahal. The largest falling off was in Jamtara and Pakaur. The reduction in Pakaur is explained as being due to the close of the litigation brought by the raiyats for setting aside sales of land to money-lenders. This litigation has been going on for some years, and the raiyats have recovered altogether more than 17,000 bighas.

The number of cases instituted fell from 5,560 in 1890 to 5,256 in 1891—a decrease of 304. This is sufficiently accounted for by the decrease in the number of original suits instituted in 1890.

The two appeal cases, in one of which the Secretary of State was appellant and in the other respondent, which were pending before the Privy Council at the close of the year 1890-91, were dismissed during the year under review. A third case, which was remanded by the Privy Council to the Court of first instance for the trial of certain issues, has come back to the High Court, and the papers will shortly be transmitted to England. Only one fresh appeal case (to which the Court of Wards is a party) has been admitted by the Council during the year.

The results of Government litigation in the Civil Courts in Bengal during 1891-92 are compared with those of the two preceding years in the following table:—

Judicial cases.		APPEALS.								Total.		
		Before High Court.			Before Lower Courts.							
		1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.	1899-00.	1900-01.	1901-02.
Decided in favour of Government	324	243	234	56	53	10	44	44	72	249	311	286
Decided against Government	61	76	76	1	13	13	6	7	7	68	75	98
Compromised, remanded, or withdrawn	87	123	6	1	7	4	1	3	3	48	60	135
Three cases in favour of Government (including cases compromised, remanded, or withdrawn)	893	799	757	56	66	23	50	47	82	865	944	944

NOTE. The figures for 1891-92 do not include those for the district of Bhagalpur, which were not received when the Legal Commissioner's report was written.

These figures are extremely unsatisfactory, both as regards the actual unsuccess of Government litigation, and as compared with the results of previous years. It is, however, fairer to exclude land acquisition cases in which only the amount of compensation, and not any principle of law or equity, is involved. Leaving these out of consideration, the percentage of original cases decided in favour of Government was 72, against 76.9 in 1890-91 and 81.5 in 1889-90. Of the 13 appeals decided by the High Court against Government during the past year, three were land acquisition cases; but omitting these there is still a very serious decrease in the percentage of suits decided in favour of Government.

The following statement shows the result of the litigation in which the Court of Wards was concerned during the past year, as compared with the two previous years:—

Total number of cases.				
	1889-90.	1890-91.	1891-92.	
Decided in favour of Court of Wards ...	604	711	903	
Decided against Court of Wards ...	62	97	139	
Compromised, remanded, or withdrawn ...	54	30	76	
Percentage in favour of Court of Wards (excluding cases compromised, remanded, or withdrawn)	90.6	88	86.6	

NOTE.—The figures for 1891-92 do not include those of certain estates in the districts of Dacca, Mymensingh, Bhagelpur, and Purnea.

The great increase in the number of cases decided during 1891-92 over the figures for the two previous years is said to be mainly due to the institution of a large number of rent suits on behalf of the Burdwan Raj in the Burdwan and Hooghly districts. Of 18 unsuccessful appeals in the lower Courts, five were conducted with the sanction and advice of the Legal Remembrancer's Office; the remainder, which were all rent suits and settlement appeals, were conducted by the Managers with the advice of the local officers. Out of 117 original cases which were decided against the Court of Wards, 104 were not reported to the Legal Remembrancer. Only one of these suits, viz., that of Kameswar Prasad *versus* Raja Bhiman Narayan and the Deo Raj Estate for the recovery of Rs. 32,106, is reported to have been of any importance. This case was decided in favour of the plaintiff, subject to the provisions of the Chota Nagpur Encumbered Estates Act, and both parties have appealed against the decision.

The subjoined table shows the amounts recovered under decrees in favour of Government during the year 1891-92 and the two preceding years:—

	1889-90.	1890-91.	1891-92
	Rs.	Rs.	Rs.
Amount under realisation ...	55,247	61,231	63,648
Amount realised during the year ...	11,659	14,790	30,332
Percentage of recovery ...	21.1	24.1	47.7

This shows a considerable improvement both in the actual amounts realised and in the proportion of realisations to outstandings. About Rs. 2,500 were remitted during 1891-92, and, under the orders of Government, execution proceedings against one Ashutosh Ghosh, from whom upwards of Rs. 5,400 was due on account of costs in suit, were abandoned.

The figures below represent the amount recovered on account of Wards' estates during the year as compared with the two preceding years:—

	1889-90.	1890-91.	1891-92.
	Rs.	Rs.	Rs.
Amount under realisation	11,74,880	11,92,016	10,55,704
Amount realised during the year	2,15,720	1,54,504	2,30,997
Percentage of recovery	18.3	13	21

Here also there was an improvement in the amount and proportion of realisations, but nothing could really be worse than the large outstandings which are shown to exist in this department in almost every estate. Thus in the Burdwan Raj estate, out of Rs. 2,26,571 due to the estate, Rs. 80,892 have been remitted, and a large portion of the balance is said to be irrecoverable. In the Tikari estate, out of Rs. 1,62,023 which have been decreed, more than Rs. 1,26,000 appear to be irrecoverable. In the Dighaputia estate Rs. 50,000 are irrecoverable out of Rs. 1,18,380. In the Deo Kumar and Dharm Kumar estate, the whole amount due, Rs. 45,458, is said to be irrecoverable. In the Dakhin Shahbazpur estate Rs. 22,812 out of Rs. 26,469 are irrecoverable.

Registration.

THE following table shows the number of registrations, the receipts and expenditure, and the number of registration offices open during the last six years:—

General statement.

Year.	NUMBER OF REGISTRATIONS.				* Total receipts.	Total expenditure.	Surplus.	Number of registration offices.
	Affecting immovable property.		Other registrations.	Total.				
	Compulsory.	Optional.						
1886-87	376,808	194,618*	127,123	698,539	Rs. 10,31,485	Rs. 5,61,274	Rs. 4,67,211	300
1887-88	495,599	95,164*	126,930	717,693	10,21,982	5,79,266	4,42,716	301
1888-89	531,510	113,470	135,482	780,462	10,53,172	5,09,176	4,94,296	304
1889-90	524,933	117,191	151,481	893,605	11,98,801	6,27,134	5,71,367	307
1890-91	600,413	148,765	148,118	897,316	12,40,481	6,29,359	6,11,122	322
1891-92	659,026	173,701	165,736	988,463	13,33,736	6,84,203	6,49,533	333
Increase	58,613	24,941	7,688	91,147	93,255	54,844	38,411	11
Decrease	...	...	...	...	...	...	...	...

* These figures include some deeds the registration of which has now become compulsory under the Bengal Tenancy Act.

The total number of registrations during the year was 988,463, against 897,316 in 1890-91. Of these, 832,727 were in respect of immovable property, against 749,168 in the previous year. Registrations of moveable property, which fell off from 149,350 in 1889-90 to 145,619 in 1890-91, increased during the year under review to 153,592. The most noticeable increase in any item was in instruments of mortgage of value less than Rs. 100, the number of which rose to 151,843, against 130,431 in 1890-91.

The total number of transactions involving the transfer of estates or tenures, or of shares in estates and tenures of whatsoever kind, rose to 94,894, against 89,860 in 1890-91 and 90,691 in 1889-90. The distribution of the purchasers in such transactions among the various classes concerned compares as follows with the corresponding figures of the last two years:—

Sale of estates, tenures and raiyati holdings.

	Mahajans, traders, and money- lenders.	Zamindars.	Interme- diate tenure- holders.	Raiyats.	Others.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1891-92	9.8	15.6	29.1	23.3	22.1
1890-91	9.4	15.6	27.9	24.9	22.2
1889-90	9.9	15.3	29.6	24.1	21.1

The number of raiyati holdings transferred by deed of sale during the year was 141,206, of which 37,519 were holdings at fixed rates and 103,777 holdings with rights of occupancy. The most noticeable feature of these sales is the increased tendency on the part of all classes to buy up rights of occupancy rather than holdings at fixed rates, as shown by the following figures:—

		Mahajans.	Zamindars.	Raiyats.	Others.
Holdings at fixed rates ...	1891-92	5,996	4,656	20,383	9,045
	1890-91	5,338	4,318	20,348	8,735
Holdings with occupancy rights.	1891-92	13,068	9,615	75,263	10,891
	1890-91	9,919	8,477	60,913	10,246

There was a falling off in the number of registrations under sections 12 and 18 of the Tenancy Act from 22,547 in 1890-91 to 20,391 in 1891-92. The annual decrease in operations under the Act still continues, and there is an undoubted tendency of the registration sections of that Act to become a dead-letter.

The number of perpetual leases registered rose from 82,251 to 89,024, and the number of instruments of lease other than perpetual, the registration of which is compulsory, rose from 209,726 to 219,455. Zamindari settlements have given a great impetus to the registration of small leases all over the Province.

The number of refusals to register rose from 3,908 in 1890-91 to 4,239 in 1891-92, but the result of appeals against such refusals shows a considerable improvement on last year, registration having been ordered in 383 cases and refused in 229, compared with 420 and 215, the corresponding figures of 1890-91. Applications for copies and searches rose from 30,040 to 34,236, a fact which the Inspector-General accepts as indicating the increased efficiency and popularity of the Department.

During the year 11 new rural sub-registry offices were opened, six *ex-officio* offices and one rural office were converted into special offices, and one *ex-officio* office into a rural one. Since the close of the year five more special offices have been opened in stations where the work has formerly been done by *ex-officio* Sub-Registrars. It is desirable that the latter class of officers should disappear altogether, and that the multiplication of rural sub-registry offices, where the need for them is clearly established, should be encouraged. The opening of new offices may lead to a diminution of the profits of the Department for a year or two, but, if carried out with discretion, tends finally to an increase in the revenue, besides being greatly to the convenience of the people.

The number of inspections made during the year by the Inspector-General and other officers of the Department was 949, compared with 879 in 1890-91. Adding to these the inspections made by the Lieutenant-Governor and the Commissioners of Divisions, the total number of inspections of registration offices made during the year must have been close on 1,000, and the Inspector-General reports that a decided gain in smartness and efficiency throughout the Province has been the result. The number of inspections by Special Sub-Registrars, in which a falling off was noted last year, rose in the year now under review from 273 to 300. There is still, however, a noticeable failure in this respect on the part of some officers of this class. The Inspector-General recommended that as the salaries of these officers are given on account of their duties of inspection, those who have ten or more offices to inspect receiving Rs. 100 a month, and others Rs. 75, failure in these duties should be followed by proportionate loss of pay. This proposal has been accepted by the Government, and in future any officer failing, after due notice given, to perform the requisite number of inspections, will be liable to a reduction of pay under the orders of Government on the recommendation of the Inspector-General.

The following table shows the working of Act I (B.C.) of 1876 for the Working of the Muhammadan Marriage Registration Act. voluntary registration of Muhammadan marriages and divorces since its introduction:—

YEAR.	Number of districts in which the Act was in force.	Number of offices open on the 31st March.	Number of marriages registered.	Number of divorces other than <i>kholas</i> registered.	Number of <i>kholas</i> registered.	Total number of ceremonies registered.
1876-77	14	77	2,555	402	161	3,118
1877-78	14	103	7,391	1,404	695	9,390
1878-79	14	103	8,161	1,705	771	10,637
1879-80	14	107	7,137	2,497	623	9,857
1880-81	14	133	6,777	1,874	779	8,430
1881-82	14	167	4,951	2,259	667	7,867
1882-83	14	113	6,038	2,247	766	8,081
1883-84	14	112	4,273	2,316	895	7,483
1884-85	14	112	3,913	2,610	957	7,410
1885-86	14	112	3,993	2,423	1,109	7,524
1886-87	14	112	3,926	2,179	1,147	7,252
1887-88	14	112	4,100	2,478	1,090	7,668
1888-89	14	113	4,527	2,819	1,113	8,459
1889-90	14	113	3,959	3,119	1,137	8,215
1890-91	14	116	4,063	3,154	1,234	8,451
1891-92	19	151	5,442	3,260	1,474	10,176

The Act was extended to five new districts, viz., Calcutta, 24-Parganas, Jessore, Murshidabad, and Jalpaiguri, during the year under review, and 36 new offices were opened—35 in the new districts, and 1 in Nadia. Only two of the new districts, however,—Calcutta and the 24-Parganas,—commenced operations during the year and show excellent results for so short a period. The increase in the number of marriages registered, which was greater than in any year since 1880-81, is satisfactory. There can, however, be little doubt that the number of registrations still bears a very inconsiderable proportion, probably not more than from 2 to 3 per cent., to the total number of Muhammadan marriages during the year.

Thirty-six new companies, limited by shares, with an aggregate nominal capital of Rs. 1,11,22,000, were registered during the year 1891-92, against eighty-four companies, with an aggregate nominal capital of Rs. 3,70,57,000, in the preceding year, thus showing a decrease of Rs. 2,59,35,000 in the aggregate nominal capital. The figures in the margin will show that there was an abnormal increase in the nominal capital in 1890-91, which was entirely due to the registration of a large number of gold-mining companies. Of the above thirty-six newly-

registered companies, one was a banking company with a nominal capital of Rs. 2,00,000; thirteen trading companies with a capital of Rs. 13,57,000; three mills and pressing companies with a capital of Rs. 50,10,000; eight planting companies with a capital of Rs. 15,15,000; five mining companies with a capital of Rs. 15,00,000; and six miscellaneous companies with a capital of Rs. 15,40,000.

Ten companies increased their capital, the increase amounting to Rs. 7,01,500. Of twenty-eight companies under liquidation, twenty companies, with an aggregate nominal capital of Rs. 64,35,000, commenced dissolution during the year, and eight, with a total capital of Rs. 17,45,000, that had been under liquidation in previous years, filed their final accounts during the year.

The total amount of fees realized for the registration of companies amounted to Rs. 12,419, against Rs. 23,374 during the previous year, which was an exceptional year owing to the registration of a large number of gold-mining companies. The total expenditure incurred during the year was Rs. 660.

There were 324 companies and one guaranteed company working in Bengal at the close of the year. The following table shows their nature, number, and nominal and paid-up capital:—

NATURE OF COMPANIES.	Number.	Nominal capital.	Paid-up capital.
		Rs.	Rs.
I.—Banking and Insurance Companies ...	29	3,13,25,000	2,40,94,988
II.—Trading Companies ...	46	2,15,81,400	1,75,56,736
III.—Mills and Presses ...	36	2,93,96,000	2,12,38,489
IV.—Planting Companies ...	141	4,34,23,575	3,67,75,117
V.—Mining Companies ...	47	2,35,68,500	1,39,36,476
VI.—Ice Manufacturing Companies ...	4	8,10,000	7,45,920
VII.—Sugar Manufacturing Companies ...	1	16,00,000	15,00,000
VIII.—Other Companies ...	18	36,05,000	15,35,003
Total ...	326	15,56,08,476	11,64,81,728

Municipal Administration and Local Self-Government.

CALCUTTA MUNICIPALITY.

The total number of meetings held was 280, as against 276 in 1890-91 and 282 in the preceding year; the various Standing Committees, including the General Committee, met 161 times—a considerable advance on any previous year. The percentage of attendance of all Commissioners at all meetings was 47, that of the elected Commissioners being 46, and of the nominated Commissioners 48. The General Committee, which is the backbone of municipal administration in Calcutta, consisted for the greater part of the year of 18 members besides the Chairman and Vice-Chairman, and the average attendance at their meetings was nearly 68 per cent. Twenty-two Commissioners, as against eighteen in 1890-91, attended more than 50 meetings in the year, and out of this number ten were present more than 100 times. Four of the latter were nominated Commissioners.

Several matters of great moment were dealt with by the Commissioners during 1891-92. Among these were—improved rules for the speedy realisation of rate bills, and for the supply, maintenance, and issue of stores; the issue of a $4\frac{1}{2}$ per cent. loan for 20 lakhs of rupees; the proposal to exempt charitable institutions from the payment of rates; the deputation of the Health Officer to the Hygienic Conference in London; the electric lighting of the new road; the supply of medical aid to the southern suburbs of the town; the better disposal of objections to assessment; the proposed extension of municipal limits; the veterinary treatment of sick cattle the property of the Municipality; and the construction of a new incinerator. Many of these important questions are still under consideration.

The loan liability of the Corporation at the beginning of the year amounted to Rs. 2,12,61,771-5-6, as follows:—

				Rs. A. P.		
6 per cent. debentures	...	...	...	1,12,000	0	0
5 ditto ditto	...	...	...	1,43,00,900	0	0
4½ ditto ditto	...	...	...	10,48,300	0	0
				1,54,61,200	0	0
Consolidated loans from Government	...	...	...	58,00,571	5	6
Total				2,12,61,771	5	6

During the year this was increased by a loan of 20 lakhs raised in the open market, by a sum of 2 lakhs borrowed from the Port Commissioners for three years without interest, and by the issue of the balances of previous loans aggregating in all Rs. 1,01,000. Half of the loan of 20 lakhs was set aside for the acquisition and construction of the Harrison Road, 6 lakhs were allotted for the extension of the water-supply, and the remaining 4 lakhs for drainage. On the other hand, the Commissioners were able to pay off Rs. 2,20,103-7-9 of the consolidated Government loans and Rs. 1,03,500 of the public debt as follows:—

				Rs.
Balance of the 6 per cent. loan of 1867 (by transfer to the				
5 per cent. loan of 1887-88)	...	...	...	3,000
Balance of the 6 per cent. loan of 1870 (in cash)	...	...	...	3,000
6 per cent. loan of 1871 (do.)	...	...	...	97,500
Total				1,03,500

Consequently at the end of the year their total loan liability was represented by the following figures:—

	Ra.	A.	P.
Balance of 6 per cent. debenture loans	8,500	0	0
5 per cent. debenture loans	1,44,01,900	0	0
4½ ditto ditto	30,48,300	0	0
	<hr/>		
	1,74,58,700	0	0
Balance of consolidated loans from Government ..	55,80,467	13	9
Loan without interest from the Port Commissioners	2,00,000	0	0
	<hr/>		
Total ..	2,32,39,167	13	9

Against these liabilities the Commissioners held on the 31st March 1892 a sum of Rs. 6,30,126-11-9 in the 1 per cent. Reserve Fund. The borrowing capacity of the Municipality, based upon the annual valuation, was during the year Rs. 3,06,00,000. The circumstances under which the loan of 20 lakhs was floated show that the credit of the Municipality stands higher than ever. The permission of Government was originally obtained to the issue of a loan bearing interest at 5 per cent., but it was decided to reduce the rate of interest to 4½ per cent., and the amount of the loan at this rate was tendered for more than six and-a-half times over.

The gross income of the Municipality was Rs. 45,68,085, against Rs. 42,00,412 in 1890-91, and the expenditure Rs. 44,98,862, against Rs. 44,71,169, leaving a surplus of Rs. 69,223 on the year's working. The principal items of each are as follow:—

<i>Receipts.</i>		<i>Expenditure.</i>	
	Ra.		Ra.
General rate at Rs. 9½ per cent.	16,07,146	Interest on general loans	4,47,192
Sewage rate at Rs. 2 per cent.	3,38,240	Contributions for repayment of loans	1,86,629
Water-rate at Rs. 6 per cent.	9,30,751	General establishment	3,88,022
Lighting rate at Rs. 2 per cent.	3,38,486	General office expenditure	1,07,697
Taxes on professions, &c.	5,25,113	Road department	4,34,383
Municipal market receipts	1,22,478	Gowkhana	2,06,044
Receipts from sale of water	86,805	Conservancy	1,65,360
		Basti cleaning	1,07,235
		Sewage-rate charges.	2,79,976
		Water-rate charges	10,84,278
		Lighting-rate charges	3,65,147

The total rates now realised are equivalent to 19½ per cent. on the annual valuation of assessable property, and the existence of a surplus at the close of the year appears to justify the decision not to raise the rate to 20 per cent. The incidence per head of all taxation is Rs. 5-12-1 according to the census of 1891, as against Rs. 5-10-11 in 1890-91.

The collection of rate bills in Calcutta is entrusted to two officers, known as the Collector and the Joint-Collector, the area of whose operations corresponds, respectively, with the Town proper and the Suburbs as they stood before the amalgamation under Act II of 1888. If bills are not paid voluntarily, they are referred to the Warrant Department for realisation, or in case of dispute or failure of service to the Assessor's Department for further enquiry.

The operations of the Collector during the year just past showed some improvement since he raised the percentage of collections on the value of bills, issued from 83·94 to 86·40, and it is pointed out that this improvement was apparent in each of the three classes into which rate bills are divided, viz., those against owners, occupiers, and basti owners. This result is largely due to the fact that for the last quarter of the year the Commissioners consented to allow notices of demand to be issued by the Collector directly upon the expiry of the seven days allowed for payment under section 142 of the Municipal Act. The usual practice has been for unpaid bills to be kept by the Collector for three months without any process being taken out; at the end of that time notices of demand, the writing and serving of which often takes from two to three

months, are issued by the Warrant Department, so that the municipal rates, instead of being collected within a month of their falling due, are frequently not paid till six months have elapsed.

The work of the Joint-Collector's department was less satisfactory: it is true that he has made some improvement in his collections during the last three years, the percentages having been 60·17, 73·85, and 76·66; but even the latest figure is far below that obtained by the Collector. In the miscellaneous department his percentage of collections has fallen from 75·4 to 67·7.

While the warrant officer collected Rs. 1,93,361, he had in his hands at the close of the year uncollected bills to the value of two and-a-half lakhs, and his percentage of collections was 36·2. Sir Charles Elliott hopes that the Sub-Committee, which has been appointed to report on the working of the Warrant Department, will compass its thorough reform. It is this department to which belongs the obloquy incurred in a recent case, where, in attempting to collect an arrear which was in the main justly due, the warrant officers contrived to perpetrate so many technical errors, and acted in so harsh and inconsiderate a way, that the learned Judge who tried the case decreed heavy damages against the Municipality.

There has been greater activity in disposing of the objections to assessment, and the number disposed of in the year slightly exceeded the number filed. In the eleven wards where the assessment has been completed and revised, the result of objections has been a decrease of nearly four lakhs of rupees upon the Assessor's original valuation.

Under the general title of License and Registration are comprised such different matters* as licenses to carry on trades and professions, or to keep carriages and animals, and fees for the registration of carts and hackeries, hackney carriages and palkis, and it is satisfactory to observe that in the aggregate there is an excess of Rs. 31,207 over the budget estimate, and of Rs. 16,699 over the receipts of last year. The tax on trades and professions as usual brings in more than half the total receipts (Rs. 3,31,716), while the only other item above a lakh of rupees is the tax on carriages and animals, which realised Rs. 1,42,144. The figures show that there is still a considerable arrear of the tax first named, only 72 per cent. of the gross demand having been collected; but this figure is an improvement on that for the previous year, which was 69·2. It is also to be observed that the percentage of collections varied in different divisions of the town from 83·8 to 52·5, but it is stated that drastic measures have been adopted which should lead to an improvement. Special efforts were made to collect the arrear demands, and 4,400 licenses were issued with retrospective effect, representing a sum of Rs. 52,689—a larger number than in any previous year. The number of regular appeals against assessments was only 29, and of this number only 6 were successful. The tax on carriages and animals and the number of licenses issued continue to show a steady advance. The licenses issued were 7,212 in number as against 7,051 in 1890-91, and the tax aggregated Rs. 1,42,144, showing an advance of Rs. 1,129 on the figures of 1890-91, and of Rs. 2,219 on those of 1889-90. The registration of hackney carriages and palkis and their drivers and bearers produced Rs. 21,258 as against Rs. 16,037, and the number of carriages registered was 5,741 as against 3,634. The increase in fees is partly due to a change of the date for taking out licenses, by which fees for 18 months were collected in the year under report, and partly to an increase of the fees for second class carriages from Rs. 2 to Rs. 3. The number of palkis has increased from 380 to 609, and palki bearers have advanced from 928 to 1,614; these figures are remarkable in the face of the great numbers of passengers carried by the Tramway Company, but they doubtless have a direct relation to the falling off in the number of third class carriages, due to the higher fees sanctioned by the new Act, and to the demand of 18 months' fees upon the change of date. These statistics lead to the conclusion that the margin of profit to proprietors of hackney carriages of the lower classes in Calcutta is very small. It is also pointed out that another cause of this falling off is that a large number of third class carriages and their ponies, and a smaller number of second class carriages and their ponies, were rejected as not coming up to the standard proscribed by the bye-laws under the Hackney Carriage Act.

The Lieutenant-Governor is of opinion that these bye-laws are not yet enforced with sufficient stringency, and he is informed that many unfit carriages and ponies may still be seen plying in the streets.

The results of the litigation in which the Municipality was involved during the year were on the whole satisfactory.

Litigation.

The Commissioners appeared as plaintiff in twenty-eight and as defendant in thirteen Civil suits. They were successful in all the suits in which they were the plaintiffs; as regards those in which they were sued, they seem to have been ill-advised in defending the suit brought by the Official Assignee on behalf of the estate of Babu Jagannath Khunna, and in the case of Babu Jadu Lal Mullick, which has been decided since the close of the year, and which has already been referred to, they were found by the Judge to have acted harshly, and to have disregarded certain technical obligations.

The statistics of prosecutions instituted by the Commissioners under the Municipal Act seem to show that criminal proceedings have been taken with greater care and discrimination than has hitherto been the case: not only was the number of persons prosecuted less than in 1890-91 (16,307 as against 17,502), but the number of those whose cases were dismissed was smaller, being only 354, against 450 in 1890-91. The Commissioners complain again of the inadequate fines imposed upon conviction, and it is shown that in prosecutions by the License Department the average fine was Rs. 4-3 in 1891-92 and Rs. 4-12 in 1890-91; that in the Health Department cases they were smaller still, averaging Rs. 2-3-6 and Rs. 2-4, while in prosecutions by the Road Department they were even more insignificant, being Rs. 1-6-9 and Rs. 1-5. When it is remembered that these prosecutions referred, among others, to matters of such public importance as keeping animals without a license (1,387 cases), keeping offensive matter for more than 24 hours (630 cases), and allowing sewage to flow on the street (272 cases), it can hardly be said that the fines were deterrent. Under the Vaccination Act, 597 summonses were issued, including pending cases, as against 679 in 1890-91. In 386 cases the necessary action was taken on receipt of the summons, and the children were either vaccinated or brought for inspection, as the case might be, and the number actually convicted and fined was only 76. In 1890-91 the corresponding figures were 416 and 78.

The cost of the Printing Department, in which the Municipality prints its own bills, forms, notices, and reports, amounted to Rs. 22,520, against Rs. 21,803 in 1890-91.

Printing Department.

There seems reason to believe that a considerable amount of economy can be effected in this Department.

The relation of the Commissioners to the education of the youth of Calcutta is the same as it was last year, when it attracted the unfavourable notice of Government. A Sub-

Education.

Committee was appointed to enquire and report upon the observations made by the Lieutenant-Governor; but so far their report has not been received, and no reform has been carried out. From the Commissioners' report it appears that a sum of Rs. 2,950 was allotted, of which Rs. 2,935 were actually expended during the year as grants-in-aid to 66 schools, but it is not stated what the number of scholars was, nor of which sex they were. It follows from the character of the population that the number of children of a school-going age is less in Calcutta than is usual: the Health Officer, basing his figures on the census, states the number of boys of that age in the Town proper to be 36,564, which gives a percentage of 11.5 on the male population: this ratio, applied to the whole municipal area, would yield 49,142 as the real number of boys of the school-going age in Calcutta. This figure may be accepted as showing the number of boys for whom the Corporation of Calcutta is bound to see that educational provision is made, and this duty has not hitherto been performed. From the statistics given by the Education Department, it seems probable that a very large proportion of these boys is actually at school. If the facts are so, it is not the Municipal Administration nor the Municipal Funds to which the credit is due. Indeed, the Town of Calcutta has never (it seems) given a single rupee to education; but when the larger part of the Suburban Municipality was included in the Town, a grant of Rs. 3,000 which it used to make was taken over and maintained, so that this inconsiderable sum is still the sole contribution

of the leading municipal body in Bengal to the fulfilment of one of its primary duties. On the other hand, the Provincial Government gave during last year the sum of Rs. 44,179 to primary education within the limits of Calcutta alone.

Turning now to the chief material improvements chronicled, it may be mentioned in the first place that the extension of the water-supply, both filtered and unfiltered, has

been vigorously carried on during the year, 581 stand-posts for filtered water having been erected, and more than 36 miles of pipes laid down, chiefly in the suburban area, while the completion in August 1891 of the Bhawanipur project for the south suburban area practically completed the supply for the enlarged metropolis. The Lieutenant-Governor cordially concurs in the approbation which the Commissioners bestow on their Engineer officers for the rapid and efficient execution of this important project. At the end of the year the daily supply of water was 19 million gallons of filtered and 4½ million gallons of unfiltered water, giving a daily average per head of 35·93 gallons of filtered water in the Town and 15·11 gallons in the Suburbs, besides an additional supply of 10 gallons per head of unfiltered water in the Town for bathing and cleansing purposes. Land was acquired at Pulta during the year for the construction of two more settling tanks; it has been cleared, and the construction of a circumscribing road is in progress.

Another important work which has been carried nearly to completion during the year is the Central Road, which has lately been re-named the Harrison Road in commemora-

tion of the late Sir Henry Harrison, who for nine years filled with conspicuous ability the post of Chairman of the Calcutta Municipality. The original plan was for the acquisition of a strip of land 170 feet broad from the Hooghly Bridge to the Sealdah Road, down the centre of which a first class road was to be constructed 70 feet in breadth, including foot-paths, while the surplus land on either side was to be sold as sites for buildings of a superior class. Had this scheme been carried out in full, the road would probably have been constructed free of cost to the rate-payers, since the surplus plots would have been sold at a very large profit; but much of the surplus land was exempted from acquisition on special terms arranged with the owners, and it is estimated that the cost of the scheme will be about 20 lakhs exclusive of the compensation which may be awarded in an important case not yet finally decided.

A new incinerator has been constructed at Goragacha for the consumption of the refuse of the Suburbs, and it is reported

that since the conclusion of the year under report it has been started, and is working with complete success. It is hoped that if this experience is sustained, the Commissioners will be enabled to decide on adopting this mode of disposing of their refuse generally in preference to the rude and dangerous method now followed. Very valuable testimony to the superiority of this system of destroying refuse has been borne by so eminent an authority as Sir Spencer Wells who, in an address on the 5th January 1892 to the Calcutta Medical Society, ascribed the great prevalence of deaths from tetanus to the practice which has existed for so many years of throwing the refuse of the city into the Salt Lakes.

The drainage system of the Town proper has practically been complete for some years past, and the length of pipe sewers now open is 200 miles. Since the amalgamation

of the Suburbs the Commissioners have had to face the important question of draining the added area, and they have arranged to take up the surface drainage scheme first at an early date. The Lieutenant-Governor trusts that this important matter will not be forgotten, since there can be no doubt that the higher death-rate in the Suburbs is very largely due to the unsystematic and inadequate drainage of that part of the municipality.

Under section 37, clause 7 of Act II of 1888, the Municipality are bound to expend annually a sum of not less than three lakhs of rupees on the improvement of the area newly added to Calcutta by that Act, and in the Resolution on the Report for 1889-90, the Lieutenant-Governor requested that in future the manner in which this obligation had been fulfilled should be clearly stated. The Commissioners

have not yet been able to decide exactly what expenditure is debitable to this head, but, as a matter of fact, during the past year they fully discharged this obligation, since a sum of eight and-a-half lakhs was expended on new and important works in the Suburbs, of which the principal are the extension of the water-supply (Rs. 2,94,122), the Bhawánipur pumping station (Rs. 2,71,078), and the prolongation of Lansdowne Road (Rs. 1,13,014).

Praiseworthy progress has also been made in the structural improvement of bastis. Nearly two lakhs of rupees were expended

Basti improvement.

on this work during 1891-92, and the Chairman has recorded with justifiable satisfaction that almost as much work was done in this department during the year just past as in the preceding four years. The required improvements have been carried out in eight bastis in the Town, while improvements are in progress in eleven others, and many more have been inspected and surveyed in preparation for the current year's work. In the Suburbs, to which for the first time the provisions of sections 252 to 259, Act II of 1888, have been applied, orders have been passed for the improvement of eight bastis in all.

The population of the municipal area of Calcutta was found in 1891 to be 681,560, divided as follows:—Town (i.e., the original municipal area as in 1881) 466,460, and Suburbs (the portion added by Act II of 1888) 215,100. No figures are available to show the variation of the population of the combined area since 1881, but the increase in the Town has been 33,241, or 3·55 per cent. Attention has frequently been drawn to the abnormal composition of the population of Calcutta, and it has been pointed out that it consists of a disproportionately large number of temporary adult inhabitants, that the proportion of males is unusually high, and that as a consequence the proportion of infants and children is abnormally small; moreover, that the individuals in this floating population are prone on the approach of illness or death to leave the city for their homes. These considerations sensibly affect the local death-rate, and render it abnormally low for an Indian city; while another important consideration has now been stated by the Health Officer, which detracts considerably from the credit due for the low death-rate, viz., that the death-rate of a town is largely influenced by that of its infant population, so that, when the latter is extremely small, the general death-rate must ordinarily be correspondingly favourable. The Health Officer gives figures in support of his conclusions that, during the ten years which have elapsed since 1881, some 100,000 immigrants have entered Calcutta, while 25,000 inhabitants have left it: the number of deaths during the same period was over 122,000, and of births 80,386.

The figures for the year 1891 show that there was an unusual number both of births and deaths in Calcutta during that year. They are reproduced in the following statement:—

	Urban Calcutta.		Suburban Calcutta.		Total Municipal Calcutta.	
	Number.	Ratio per mille.	Number.	Ratio per mille.	Number.	Ratio per mille.
Births	8,256	17·6	4,321	19·6	12,477	18·3
Deaths	12,033	27·9	8,184	39·4	21,517	31·5

The general death ratio of 27·9 in the Town is considerably above the decennial mean, which is 25·8, while in the Suburbs it was 39·4, against 37 in 1890. This figure, besides being in proportion much higher than that of the Town proper, is absolutely very high; but in 1891 the general provincial rate of mortality was higher than in 1890, and in comparing the suburban death-rate with that for Calcutta proper, it should not be forgotten that excluding four or five specially unhealthy wards in the Town, the general sanitary condition of the Suburbs is worse than that of the urban area: the water-supply has not yet been fully extended to the suburbs, the conservancy arrangements there are still in a rudimentary state, foul tanks and open drains and ditches abound, and thick tropical vegetation finds space to grow which conceals impurities in life, and breeds malaria in decay.

Three important points of general interest are noticed in the Health Officer's report, viz., the necessity of more stringent building regulations in order to prevent overcrowding and to maintain proper ventilation in spaces which have already been cleared and improved; the need for reservoirs of pure drinking water in bastis; and the gradual but universal pollution of the sub-soil and the atmosphere from the leakage of sewers. To the first matter the attention of the Commissioners will doubtless be directed in due course. The second they have already taken up; the difficulty is that the great mass of the labouring population who dwell in bastis return from their work in the evening, when there is no pressure on the mains, and have either to use for drinking and cooking purposes water stored in their houses, and open to every sort of contamination, or else resort to impure wells and tanks. Permission has been given to basti owners to construct covered reservoirs for filtered water, but so far advantage has not been taken of this salutary concession. With regard to the third point, in his report on the drainage of Calcutta, much stress was laid by Mr. Baldwin Latham upon the pollution of the sub-soil from the leakage of the sewers, and his observations are corroborated by the personal observations of the Health Officer and the Chairman himself. The Lieutenant-Governor commends these efforts to put theory to the test of practical observation, and will be glad to see these investigations carried further still: careful notes should be recorded of a large number of experiments in all parts of the town in order to ascertain of what kind the pollution is, to what distance it extends, and whether it is due solely to the inadequate fitting of the joints in sewers, as the Chairman would seem to think, or to exhalation, or to both in combination.

MUNICIPALITIES IN THE INTERIOR OF BENGAL.

Early in 1891-92, the attention of the Lieutenant-Governor was drawn to a judgment of the High Court, ruling that orders passed extending to particular municipalities certain provisions of the repealed Bengal Municipal Act V of 1876 did not apply to the corresponding provisions of Bengal Municipal Act III of 1884. It followed that these provisions dealing with important branches of conservancy, sanitation, and cognate subjects, were not legally in force in any municipality to which they had been extended under Bengal Act V of 1876. This state of things called for an immediate remedy. Two courses were open, either to amend the Act so as to validate orders of the kind referred to which were passed under the old Act, or to issue fresh orders under the new Act for each place affected by the judgment. While considering this point the Lieutenant-Governor was led to enter upon the general question, whether the time had not come to amend the Bengal Municipal Act III of 1884 on a variety of points which had from time to time been brought to notice as calling for amendment. The matter principally requiring reform is the system under which the assessment of municipal rates is framed, in which many irregularities are found to exist. Larger powers are also needed to enable the municipalities to enforce sanitary regulations, and provisions are required to facilitate the control of the Government over municipalities which neglect their duties—a control which can now only be exercised by the drastic process of suspending or abolishing the powers of the Commissioners. A draft Bill embodying such changes as appeared to be most urgently called for was accordingly prepared and submitted for approval to the Government of India. The question was still under discussion at the close of the year.

The total number of municipalities in existence at the close of the year was 145, being the same as in the previous year. The total population enjoying the benefits of municipal administration in the 145 municipalities in Bengal (outside Calcutta) is shown by the recent census as 2,721,405 souls. In 1881-82, when the previous census was taken, the number of municipalities including unions and stations was 185, and their population amounted to 3,005,029. The municipal population of Bengal was therefore 4·5 per cent. of the whole in 1881-82 and 3·8 per cent. in 1891-92. The decrease in the number of municipal institutions and of the population under municipal government is due to the operation of Act III (B.C.)

of 1884, which did away with a large number of unions which existed under Act V of 1876. These were small groups of villages which in reality were in no sense urban, and the administration of which it seemed better to transfer to the District and Local Boards then about to be formed.

The percentage of rate-payers is highest in the Presidency Division, where it is 21·3, and lowest in the Orissa Division, where it is no more than 14·5. In some few municipalities the proportion per cent. considerably exceeds the provincial average, as, for instance, in the three municipalities in Nadia of Birnagar (34·3), Ranaghat (30·8), and Santipur (30·2). In Cuttack and Darbhanga, on the other hand, the ratio was as low as 8·8 per cent. The extremely low figures in these two important municipalities indicate either an extraordinary proportion of the very poorest classes or the need for a thorough revision of the assessment. The average proportion of rate-payers to the whole population within municipal limits was 17·4 per cent.

The system under which two-thirds of the total number of Commissioners fixed for each municipality are elected by the rate-payers was, as in the previous year, in force in all the municipalities except the twenty-eight named in the Resolution for 1890-91.

General elections were held only in the municipalities of Kharar in Midnapore and Hazáribágh. In both places the elections were contested, but not with much spirit.

The average attendance of voters at Kharar and Hazáribágh was 27·6 and 42·7 per cent. respectively of the total number of electors qualified to vote. The bye-elections were in many cases contested, the percentage of attendance of voters varying from 77·7 at Arrah to ·09 at Lalbagh. Two of the bye-elections held during the year failed, one at Uttarpara and the other at Cuttack, and the vacancies were filled by the appointment of Commissioners under section 16 of the Act. It is curious to notice that in one ward in the Meherpur Municipality there are only three persons registered as qualified to vote at an election, and it seems ridiculous to recognise it as a separate ward for electoral purposes. The general percentage of voters at the elections held during the year for which complete figures are given was only 37·5, a figure which indicates clearly enough that, in spite of statements often made to the contrary, the average voter sets but little store by the privilege of the franchise.

The following table shows, separately for each Division, the constitution of the Committees of the municipalities, together with the professions or occupations of their members:—

NAME OF DIVISION.	Nominated.	Elected.	Total.	Europeans.	Natives.	Government servants.	Landholders or other landholders.	Peasants and multi- peasants.	Planters.	Merchants, traders and money-lenders.	Medical practitioners.	Schoolmasters (other than Government servants).	Government peo- ple.	Unspecified.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Burdwan	141	225	366	20	346	40	75	70	...	57	40	10	17	37
Presidency	238	338	576	23	553	64	124	78	1	44	40	10	16	174
Rajahmundry	88	97	185	34	147	44	31	36	...	12	17	9	7	88
Dacca	168	166	334	13	321	56	47	71	...	14	8	18	1	91
Chittagong	33	49	73	7	66	15	4	32	...	16	...	8	1	5
Patna	180	165	345	46	299	70	58	57	8	59	18	10	4	24
Bhagalpur	71	94	165	24	141	24	25	35	4	15	7	3	5	38
Orissa	44	31	75	7	68	25	15	23	...	3	...	5	4	5
Chota Nagpur	78	40	118	15	103	22	19	40	...	15	1	3	4	19
Total	979	1,162	2,141	105	2,036	306	429	461	13	224	191	67	55	507
Percentage	45·84	54·16	...	4·93	95·06	14·29	20·5	21·57	·61	10·7	8·9	3·08	2·5	23·7
Ratio	46	55	...	5·2	91·8	17·5	22·4	23·4	·6	11·5	9·1	3	2·5	18·1

The proportion of members of the legal profession is highest in the Chittagong and Chota Nagpur Divisions, where it is 36·9 and 34·7 per cent., respectively. In the Presidency and Burdwan Divisions the percentage is only 13·5 and 20·7. The landholding class are best represented in the Patna Division (26·2 per cent.), the Presidency (22·1 per cent.), Dacca (21·8 per cent.), and Bhagalpur

(21·2 per cent.). In the Patna Division there is a considerable proportion of non-official Europeans, and in the Monghyr district three-fourths of the Commissioners are European employes of the East Indian Railway. The table in the margin, which compares the percentage of officials and Europeans, respectively, on the total number of Commissioners during 1890-91 with the corresponding percentages of the previous five years, shows that the fluctuations have been very small.

The largest number of meetings during the year in any municipality was 56, held by the Municipal Commissioners of Kanurkhali, a figure which implies either an extraordinary devotion to business or an unusual difficulty in securing a quorum. In thirty-seven municipalities the number of meetings held exceeded 20; during the previous year only twenty municipalities reached this standard.

In respect of percentage of attendance the results of the year are satisfactory. In five municipalities three-fourths of the Commissioners attended every meeting, and in ninety-seven others the attendance was more than 50 per cent., so that the minimum attendance of one-half suggested in the Resolution for 1890-91 was attained in one hundred and two municipalities out of one hundred and forty-five as against eighty-three in 1890-91. The highest average percentage of attendance was attained in the North Barrackpore Municipality, where it is shown to be 87·5, and the lowest place is held by Ranchi, where at 12 meetings an average of only 30·7 per cent. of the Commissioners attended.

In consequence, probably, of the remarks made in last year's Resolution, considerable attention has been given in this year's reports to the question of appointing Ward Committees, and the general opinion appears to be unfavourable to their creation. They exist in 19 municipalities only.

The Municipal Benches in the Province, which were four less than in 1890-91, tried 20,090 cases of nuisance and breaches of conservancy rules in which 17,354 persons were convicted, against 19,668 cases and 17,689 persons convicted in the previous year. The amount of fines inflicted on each offender varied considerably, the general average being Re. 1-2-1. Some few of the benches appear to exist in little more than name, the work done at Govordanga, Nator, and Daudnagar, for instance, being very small, while seventeen others tried less than 100 cases.

The tax on holdings was in force in thirty-six municipalities* as in the previous year, and was levied at rates below the legal maximum (which is, with two exceptions, 7½ per cent. per annum on the annual value of holdings) in twelve towns as in 1890-91.

The average incidence per head of municipal taxation of all kinds throughout Bengal (excluding Calcutta) was Re. 0-12-4, against Re. 0-11-11 in the previous year; and in sixty-seven municipalities (none in the Rajshahi Division) the incidence amounted to 8 annas or less per head, against

seventy-two in the preceding year. The figures for the several Divisions show great variations, which do not seem to be altogether commensurate either with the wealth or the wants of the towns in question:—

Division.	INCIDENCE OF TAXATION.						REMARKS.
	Maximum.		Minimum.		Average.		
	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.	
Burdwan	Rs. 2 3 3	Rs. 2 3 0	Rs. 0 3 2	Rs. 0 3 3	Rs. 1 2 0	Rs. 1 2 8	
Presidency	3 0 5	2 9 1	0 4 0	0 4 10	0 12 0	0 13 11	
Rajshahi	4 9 1	3 5 0	0 10 3	0 9 8	1 5 11	1 4 10	
Dacca	2 0 11	1 10 3	0 3 4	0 4 3	0 15 0	0 14 7	
Chittagong	1 0 4	1 3 2	0 3 9	0 4 4	0 11 8	0 12 10	
Patna	0 15 8	0 15 4	0 3 4	0 3 3	0 8 4	0 7 8	
Bhagalpur	0 14 3	0 16 4	0 4 8	0 4 3	0 9 8	0 10 0	
Orissa	0 11 11	0 11 0	0 4 8	0 4 6	0 5 10	0 8 4	
Chota Nagpur	0 0 0	0 0 0	0 4 2	0 4 1	0 6 10	0 7 3	
Average total for the Province	...	...	...	...	0 11 11	0 12 4	

The average rate in the thirty-six towns where the tax is levied on holdings,—which comprise the largest and wealthiest towns in the Province,—is 9 annas per head: in the remaining one hundred and nine municipalities where it is levied on persons it is 6 annas per head.

The general or partial revisions of assessment undertaken and brought into force during the year resulted in an increase of income in fifty-two and a loss in twenty municipalities. In some cases the operations were not completed during the year, and in others it was proposed to enforce the new assessments with effect from 1st April 1892. The largest increase of income accrued to the municipalities of Muzaffarpur (Rs. 3,000), Cossipore-Chitpur (Rs. 2,805), Jessore (Rs. 2,114), Barisal (Rs. 2,123), Balasore (Rs. 1,778), Bardwan (Rs. 1,442), Jalpaiguri (Rs. 1,290), Dinajpur (Rs. 1,216), Nator (Rs. 1,171), Jajpur (Rs. 1,044), and Kendrapara (Rs. 1,000).

The current demand was Rs. 19,59,240, and out of this Rs. 15,69,550, or 80·1 per cent., was collected. Of the arrear-demand of Rs. 4,15,370 only Rs. 2,99,455, or 72 per cent., was collected, and Rs. 61,011, or 14·6 per cent., was remitted. The total demand (including arrears) amounted to Rs. 23,74,610, of which Rs. 18,69,005, or 78·7 per cent., were collected, and Rs. 1,10,528, or 4·6 per cent., remitted, leaving an outstanding balance of Rs. 3,95,077, being about 16·6 per cent. of the total demand. The table below summarises the results obtained by the municipalities in the various Divisions in this branch of administration. The closing balance is less by Rs. 20,293 than the opening balance was:—

Percentage of total collections on total demand.	NUMBER OF MUNICIPALITIES.								
	Burdwan.	Presidency.	Ranikhet.	Dacca.	Chittagong.	Patna.	Bhagalpur.	Orissa.	Chota Nagpur.
up to 60 to 69·9 per cent.	0	10	4	7	1	14	3	2	4
" 60 to 69 " "	6	10	4	4	3	7	6	1	3
" 70 to 79 " "	4	11	...	5	1	3	2	1	1
" 80 to 89 " "	1	5	2	...	...	1	1	1	2
" 90 to 99 " "	6	1	...	...	...	...	...	...	...
Total	20	37	11	16	5	25	11	5	9
									145

It will be seen that the Dacca and Chittagong Divisions show the best results all round. In the Dacca Division seven out of its eleven municipalities are in the highest group,—and in neither Division did any municipality collect less than 70 per cent. Patna has the largest proportion of its municipalities in the first class. The Burdwan and Presidency Divisions occupy the last places in the scale, and it is to be regretted that these Divisions, which are considered by many of their inhabitants to be in the forefront of progress, should show so poor a result.

The Hackney Carriage Act was extended to the towns of Naihati and South Barrackpore in the 24-Parganas, and the Pilgrim Lodging-house Act was extended to the town of Nadia during the year. The Municipal Commissioners of Debhata in Khulna obtained sanction to levy tolls at a ferry over a khal within their jurisdiction, but there were no receipts from it in the year under report. The provisions of the Municipal Act regarding the levy of fees on the registration of carts kept or habitually used within the municipal area have been introduced into Lalganj, Sitamarhi, and Madhubani in the Patna Division and Chaibassa in the Chota Nagpur Division. A water-rate of 3 per cent. on the annual value of holdings was for the first time collected in the Bhagalpur Municipality. In the municipalities of Burdwan, Bhadreswar, Kalna, and Balasore fees were for the first time levied under Part IX of the Act, although that Part had been extended to those municipalities some time ago.

The conservancy and other provisions of Part VI of the Act were extended wholly or partially during the year to the municipalities of Burdwan, Howrah, Sonamukhi, Bally, South Suburbs, Baranagar, South Barrackpore,

Melherpur, Satkhira, Santipur, Kushtia, Patna, Tikari, Cuttack, Jajpur, Puri, and Hazáribágh. Part VII, which relates to water-supply, was extended to part of the municipality of Bhágalpur. Part IX, which regulates the construction and cleansing of latrines, was extended to the municipalities of Howrah, Uttarpara, Kumarkhali, and Kishorganj, and to the portions of the municipalities of Bhadreswar, Hooghly and Chinsura, Baranagar, North Barrackpore, Krishnagar, Patna, Motilari, and Cuttack. The provisions of this Part, which had been extended to Motilari Municipality in December 1888, were withdrawn during the year on the recommendation of the Commissioners. Part X, which contains provisions for the regulation of markets, was extended to the municipalities of Burdwan, Howrah, South Barrackpore, Patna, Tikari, Monghyr, and Hazáribágh. Bye-laws framed under section 350 of the Act by the Commissioners of the following municipalities were confirmed by Government :—

Serampore.
Baranagar.
Satkhira.

Goverdanga.
Dacca.
Nasirabad.

Tikari.
Dandugar.
Siwán.

Darbhanga.
Cuttack.
Jhalsa.

The following table compares the opening balances, income, expenditure, and closing balances of the municipalities in each Division for the year 1891-92 with those of the preceding year:—

DIVISION.	Opening balances.		Income during the year.		Total funds available for expenditure.		Total expenditure.		Closing balance.	
	1890-91.	1891-92.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Burdwan	68,925	69,047	6,96,052	7,37,004	7,04,700	7,37,047	7,04,653	6,80,837	69,047	37,310
Presidency	71,955	91,547	5,60,671	6,80,125	6,49,626	6,81,671	5,40,082	5,80,434	91,544	1,01,327
Rajshahi	38,027	44,000	2,88,000	3,01,051	3,20,527	3,40,620	2,81,330	3,22,003	44,007	24,377
Dacca	42,525	65,000	3,95,144	3,32,822	4,35,393	3,97,902	3,70,170	3,44,223	65,000	33,690
Chittagong	5,500	13,394	71,431	78,069	76,927	90,403	63,438	70,016	13,394	16,448
Patna	47,670	44,833	4,72,167	5,21,700	5,10,886	5,00,535	4,74,806	5,00,463	44,831	69,162
Bhagnipur	25,491	22,500	1,37,787	1,93,500	2,13,597	2,17,065	1,01,644	1,00,864	22,500	37,591
Orissa	5,023	6,394	60,739	92,498	80,354	107,879	84,665	94,762	6,000	3,117
Chota Nagpur	11,220	14,200	64,400	65,543	75,629	70,812	61,331	62,376	14,200	17,457
Total	3,19,202	3,60,802	28,34,204	29,04,232	30,92,406	32,03,074	27,91,584	28,06,036	3,60,942	3,90,028

There is a total discrepancy of only Rs. 90 between the opening balance of 1891-92 and the closing balance of the previous year. This is due mainly to the re-adjustment of the old accounts of the Revelganj Municipality. The other small discrepancies have been explained by the local officers.

There was a total increase in the income of municipalities in Bengal (except Calcutta) of Rs. 80,028. The income under the debt and suspense heads, including loans, deposits, and advances, amounted to Rs. 2,51,057, against Rs. 2,88,144 of the previous year; and the real increase in the income may therefore correctly be taken at Rs. 80,028 + Rs. 37,087 (the difference between the receipts under the debt heads), or a total of Rs. 1,17,115.

The following table shows the income from taxation proper during 1891-92 and the two previous years:—

Year.	NAMES OF DIVISIONS.									
	Burdwan.	Presidency.	Rajshahi.	Dacca.	Chittagong.	Patna.	Bhagalpur.	Orissa.	Chota Nagpur.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1890-90	5,07,501	3,97,617	1,08,392	2,33,810	46,148	3,58,813	1,46,136	62,364	39,541	12,35,911
1890-91	5,43,474	4,19,803	1,76,078	2,10,760	40,737	3,60,439	1,22,088	67,764	38,180	12,91,336
1891-92	5,42,855	4,60,946	1,76,379	2,30,169	55,208	3,93,542	1,45,391	72,911	40,797	13,29,308

The net increase or decrease of income under this head in each Division during each of the last three years, as compared with the next preceding year, is shown in the following table:—

Division.	INCREASE (+) OR DECREASE (—).			Total.
	1889-90.	1890-91.	1891-92.	
	Rs.	Rs.	Rs.	Rs.
Burdwan ...	+ 7,318	+ 35,973	+ 381	+ 43,672
Presidency ...	Not known*	+ 31,785	+ 37,344	+ 69,129
Rajshahi ...	+ 7,371	+ 7,820	— 693	+ 14,498
Dacca ...	— 8,739	— 13,050	+ 18,393	— 3,406
Chittagong ...	— 6,177	+ 4,589	+ 5,561	+ 3,973
Patna ...	+ 36,730	— 2,374	+ 27,103	+ 61,459
Bhagalpur ...	+ 1,826	— 10,153	+ 15,298	+ 6,971
Orissa ...	+ 11,172	+ 1,820	— 1,793	+ 11,199
Chota Nagpur ...	+ 8,003	— 352	+ 2,608	+ 10,259
Total ...	+ 57,504	+ 56,049	+ 1,04,202	+ 2,17,755

* Owing to the abolition of the Nalanda Municipality on the 1st April 1890.

Thus the total income from taxation during 1891-92 shows an increase of Rs. 1,04,202, or 5·2 per cent., over that of the previous year, whilst in the case of the Divisions named in the margin the increase ranged between 11·6 and 6·5 per cent. of the previous year's income. The total receipts from the municipalities show an increase under the following heads:—

Heads of Revenue.		Amount of increase.
Taxation—		Rs.
Tax on houses and lands	...	16,481
Tax on animals and vehicles	...	6,722
Tax on professions and trades	...	3,293
Water-rate	...	3,520
Conservancy rates	...	39,167
Tax on persons according to their circumstances and property	...	41,041
Total Taxation	...	1,10,224
Miscellaneous	...	12,913
Total increase	...	1,23,137

On the other hand, there was a decrease under the following heads:

Heads of Revenue.		Amount of decrease.
		Rs.
Tolls (on roads and at ferries)	...	4,174
Lighting rate	...	1,848
Extraordinary and debt	...	37,087
Total	...	43,109
Net increase	...	80,028

There was an increase under this head, as compared with the previous

Tax on houses and lands.

Name of Municipality.	Receipts.		Increase.
	1890-91. Rs.	1891-92. Rs.	
Cossipore-Chitpur...	48,871	65,244	6,573
Santipur	10,511	17,027	7,116
Jessore	7,569	8,725	1,168
Dacca	65,063	68,518	3,476
Narayanganj	17,017	19,517	2,500
Chittagong	12,862	20,000	7,138
Patna	40,097	70,036	9,939
Gaya	34,504	38,439	3,935
Muzaffarpur	21,341	26,998	6,657
Purnea	8,895	11,407	2,512
Subhojanj	2,725	5,665	2,940

year, in five Divisions, i.e., in all except Burdwan, Rajshahi, and Orissa, which show a falling off of Rs. 8,564, Rs. 6,029, and Rs. 1,420, respectively; in the Chota Nagpur Division this form of taxation is not in force in any of the municipalities. The municipalities named in the margin show the largest amount of increase in the five Divisions referred to above.

The increase under this head was shared by all the Divisions except Chitta-

Tax on animals and vehicles.

gong and Patna, and it occurred mainly in the municipalities of Midnapore (Rs. 3,258), South Suburban (Rs. 1,413), and Rangpur (Rs. 1,798). In the Patna Municipality there was a falling off of Rs. 5,127, chiefly due to decrease in receipts from the tramways, the Commissioners having remitted one-half of the rent due from the trustees up to March 1892. The increase in Midnapore is due to the realisation of the arrears owed by the contractor to whom the cart registration fees were farmed out in previous years: this system has since been discontinued, since it was condemned by the Commissioner of the Division and the Legal Remembrancer. Although there was a slight increase in the Howrah Municipality, the Magistrate thinks that the revenue from this source admits of much improvement.

Water-rate.

This rate was for the first time levied in the Bhágálpur Municipality during the year 1891-92, where it produced Rs. 5,286. The only other municipalities where the tax is in force are Bardwan and Darjeeling. In the former there was a slight increase, whilst in the latter place there was a decrease of Rs. 2,009, due to a reduction in the rate at which the tax was levied.

The increase under this head was distributed among all the Divisions except Bardwan, Orissa, and Chota Nagpur, which show a slight falling off of income. The total income of the remaining six Divisions shows an increase of about 20 per cent. over the income during the previous year.

It is satisfactory to notice that under this head there has been an increase on the totals of all the Divisions as compared with the previous year the net increase amounting to about 8 per cent. on the previous year's income.

Tax on persons according to their circumstances and property.

Of the one hundred and nine municipalities in the Province in which this form of taxation is in force as an alternative to the tax on houses and lands, eighty municipalities show an increase, the remaining twenty-nine,* distributed among all the Divisions except Chittagong, showing a falling off of income. Appreciable increase of revenue from this source occurred in the municipalities of Baidyabati (Rs. 1,252), Ghatál (Rs. 1,010), Joynagar (Rs. 1,046), Khulna (Rs. 1,322), Lalbagh (Rs. 5,079), Barisal (Rs. 1,187), Muktagacha (Rs. 1,406), Sasarán (Rs. 4,345), where it rose from Rs. 3,790 in 1890-91 to Rs. 8,135 in 1891-92, Darbhanga (Rs. 2,290), Colgong (Rs. 1,142), English Bazar (Rs. 1,234), and Kendrapara (Rs. 1,000). The increase was due to realisation of arrears in many places and in some to revision of assessment.

This rate is levied only in the Howrah Municipality at the rate of $3\frac{1}{2}$ per cent. on the annual value of holdings in a portion of the town, and of 3 per cent. in the rest of the area

lighted with gas. The decrease of Rs. 1,848 is attributed to laxity on the part of the collecting staff.

Lighting rate.

No tolls are levied on any roads, and the receipts under this head represent

Tolls on roads and at ferries.

income from ferries alone. There was a slight falling off under this head. Whilst some municipalities show a small increase of income, noticeably Chapra (Rs. 1,244), Daudnagar (Rs. 947), and Barisal (Rs. 1,165), there was a large falling off of

income in the municipalities of Chittagong (Rs. 2,247), Cuttack (Rs. 2,037), Bhagalpur (Rs. 1,613), and Muzaffarpur (Rs. 933).

The following instances of private munificence are specially deserving of acknowledgment:—Raja Mohendra Lal Khan of

Private munificence.

Narajal continued to contribute Rs. 25 a month to

the Midnapore Municipality for the maintenance of the ward for contagious diseases. In Ghatál the masonry bathing ghat commenced by Babu Chintamani Kumar in 1890-91 was completed during the year. Maharani Sharnomoyee, M.L.O.C.I., of Kasimbazar, gave a further sum of Rs. 500 for the construction of a road in Howrah, which has been called by her name. To the Bally Municipality Babu Akhoy Churn Guha, a rich gentleman of Calcutta, has made a gift of a strip of land, 15 feet wide and 490 yards long, for the construction of a road. Babu Srishtidhar Conch, another wealthy merchant of Goverdanga, has sunk a well at a cost of Rs. 5,000. Babu Girija Prosunno Mukerjee, zamindar of Goverdanga and the Chairman of the local municipality, has caused a large *jheel* to be excavated, covering an area of nearly 15 bighas, at a cost of Rs. 5,000. Srimati Monmohini Dasi of Naihati, widow of the late Babu Tarak Chandra Sarkar, of Kerr, Tarak and Company, has built an iron shed with ornamental pillars in the masonry ghat which she constructed last year at a cost of Rs. 6,000. At Jessore, Babu Umesh Chandra Ghose has excavated a new tank at Nilganj at his own expense. A substantial building, with ample and comfortable accommodation and spacious frontage, was erected in the heart of the town of Rampur Boalia, adjoining the college buildings, for the purposes of a hostel for the Hindu students of the college. The cost, which was about Rs. 10,000, was for the most part met by a contribution from the Dighapattia ward's estate. Babu Upendra Nath Sen, zamindar of Basanda, made a donation of Rs. 2,800 to the Barisal Municipality, for the construction of a cholera ward, attached to the Municipal Charitable Dispensary. Kazi Raizuddin Ahmed, a Municipal Commissioner of Dacca, constructed an embanked road in the Dacca Municipality at his own cost. Mr. Lucas, a zamindar, excavated a tank near the bazar in the Pirojpur Municipality. Nawab Ahsanulla, Khan Bahadur, C.I.E., of Dacca, contributed Rs. 3,000 to the Comilla Municipality for the erection of an additional ward in the municipal dispensary. The hospital for females at Comilla, which is being erected by the munificence of the Nawab Sahiba Faizunissa and her co-sharers, will be within the Comilla Municipality, where the site for it has also been given by these ladies. Messrs. Burrows, Thomson, and Mylne of Bilhia contributed Rs. 652 towards the maintenance of the Jagdispur dispensary, and kept up a middle class English school at a cost of Rs. 1,354. Mr. J. Hennessy, a zamindar and indigo-planter of Mathurapur, made a gift of Rs. 1,000 for the improvement of the accommodation of the dispensary in the English Bazar Municipality. Raja Baikuntha Nath De, Bahadur, and Babu Satyendra Nath Dey re-excavated the Rani Sagar tank in the Balasore Municipality, at a cost of Rs. 3,764, and established a charitable dispensary for females, endowing it at the same time with an income of Rs. 600 per annum.

Though considerable activity has been displayed during the year in pre-

Loans.

paring schemes for water-supply and drainage and several loans have been applied for, the amount

of loans actually brought to account during 1891-92 was only Rs. 63,000. Of this sum Rs. 30,000 were lent by Government to the Serampore Municipality for the improvement of the drainage, and Rs. 7,500 were paid over to the Rampur Boalia Commissioners in continuation of a loan for an equal amount in 1890-91. Of the balance, Rs. 25,000 at $4\frac{1}{2}$ per cent. interest were raised in the open market by the Burdwan Municipality at a discount of a little more than three-fourths per cent., and Rs. 500 represents part of a sum advanced to the Chapra Commissioners by a private individual.

The total municipal expenditure of the Province (excluding Calcutta) was

Expenditure.

Rs. 28,66,056, against Rs. 27,81,524 of the preceding year, showing an increase of Rs. 84,532.

The year closed with a balance of Rs. 3,99,028, against Rs. 3,60,942 of the year 1890-91.

The largest expenditure was as usual incurred on Conservancy (Rs. 8,00,365), Roads (Rs. 4,32,690), Hospitals and dispensaries (Rs. 2,58,544), Office establishment (Rs. 1,87,452), Collection charges (Rs. 1,38,896), Lighting (Rs. 1,39,511), and Public Instruction (Rs. 1,30,068). The chief differences in expenditure, as compared with that of the previous year (excluding the debt and suspense heads), are the following:—

<i>Increase.</i>			
Heads of expenditure.			Amount of increase.
			Rs.
Office establishment and collection charges	...	...	31,012
Drainage	...	...	6,772
Conservancy	...	...	65,156
Hospitals and dispensaries	...	...	25,893
Public Instruction	...	...	14,780
Miscellaneous	...	...	69,194

<i>Decrease.</i>			
Heads of expenditure.			Amount of decrease.
			Rs.
Survey of land	...	...	7,915
Lighting	...	...	3,828
Water-supply	...	...	48,725

An increase of expenditure under these heads occurred in every Division.

Office and Collection establishments.

The increase in the Bardwan Division was contributed to by all the municipalities except Howrah and Sonamukhi, the former showing a saving of Rs. 2,858, due to the employment of a Secretary on reduced pay. The large increase of Rs. 1,235 in Baidyabati is reported to have been due to a general revision of the establishments which was necessary owing to the state of chaos into which the office had drifted from internal dissensions. The present Chairman and Vice-Chairman are trying their best to bring matters into proper working order. The increase of expenditure throughout the Province is variously attributed to the payment of larger sums as contributions on account of audit and banking charges, to grade increments allowed to officers according to the fixed scale of pay, to the employment of additional establishments in the Collection Department for the prompt realisation of municipal dues, and to the purchase of furniture.

The five Divisions named in the margin show an increase of expenditure,

Drainage.

which was almost stationary in the Rajshahi Division, the three remaining Divisions showing a falling off. The decrease of expenditure was due not so much to the apathy of the Municipal Commissioners on this subject as to a general desire on their part to proceed on an approved plan, as in several places experience had

Bardwan, Chittagong,
Presidency, Patna,
Orissa.

shown that by taking up the improvement of the drainage of portions of municipalities before maturing a complete project, money had been wasted. Comparatively large expenditure was incurred in the municipalities of Serampore (Rs. 9,421), Darjeeling (Rs. 5,608), and Rampur Boalia (Rs. 7,904). Projects for drainage were considered during the year by the municipalities of Bardwan and Howrah, and also by the municipalities on the east bank of the Hooghly, but no final conclusions were arrived at. The Serampore Municipality drew a sum of Rs. 30,000, which was sanctioned so long ago as 1889-90. In Puri and Rampur Boalia loans of Rs. 25,000 and Rs. 15,000 were taken for the same purpose, and considerable progress has been made. In Patna the municipal area was carefully surveyed, and a comprehensive drainage scheme estimated to cost over three lakhs drawn up for the approval of Government: a similar scheme was undertaken in Arrah and in Muzaffarpur with the assistance of the District Engineer: a loan has been applied for in all three cases. For the

drainage of several other towns the schemes are in various stages of progress. Thus in the municipalities of Raniganj, Midnapore, Santipur, Dinajpur, Jalpaiguri, Pabna, and Comilla, drainage schemes were submitted to the Sanitary Board, while surveys are being carried on in Hooghly, Suri, Bally, Danhat, Krishnagar, Meherpur, Bogra, and Faridpur.

The figures showing for the year under review the expenditure under this head include the totals of three heads in the previous year's accounts, viz., "Conservancy," "Road watering," and "road cleaning." It is satisfactory to notice that there has been

	Increase
	Rs.
*Burdwan ...	8,672
Presidency ...	27,223
Rajshahi ...	11,108
Dacca ...	4,539
Chittagong ...	4,013
Patna ...	5,464
Bhagalpur ...	1,868
Orissa ...	2,302
Chota Nagpur ...	187

an increase of expenditure in all the Divisions,* which was largest in the Presidency. In the Burdwan Division this was most marked in the municipalities of Burdwan (Rs. 2,402), Hooghly and Chinsura (Rs. 1,102), Serampore (Rs. 1,412), and Baidyabati (Rs. 3,304), where the expenditure rose from Rs. 3,480 in 1890-91 to Rs. 6,784 in 1891-92. There was a decrease in Howrah of Rs. 1,811, attributed to savings effected by the use of the conservancy railway. The increase in Burdwan is due to the strengthening of the sweeper staff and repairs to latrines. Repairs of road-watering carts and purchase of some new ones mainly caused the increase in Hooghly-Chinsura. The increase in Serampore is attributed to the purchase of some new bullocks and some zinc buckets, as also to the adoption of preventive measures to check the progress of cholera which broke out in the town. Acquisition of land for the burial of night-soil and strengthening of the latrine-cleansing establishment caused the increase in Baidyabati. In the Presidency Division the largest increase of expenditure occurred in the municipalities of Cossipore-Chitpur (Rs. 7,222), Maniktala (Rs. 15,438), South Suburbs (Rs. 1,038), and Berhampore (Rs. 1,622). The increase in Cossipore-Chitpur and Maniktala is due to the acquisition of land required for new trenching grounds. In the Rajshahi Division, the municipality of Darjeeling shows a large increase of Rs. 9,786, which is ascribed to a thorough and general improvement in the sanitary arrangements of the place. In the Dacca Division there was an increase of Rs. 2,434 and Rs. 1,331, respectively, in the municipalities of Barisal and Nasirabad, due in the former case chiefly to the erection of corrugated iron sheds for sweepers, and to the purchase of cattle and carts, and in the latter to the appointment of a conservancy overseer. In the Chittagong Municipality there was an increase of Rs. 3,376. In the Patna Division the Patna and Arrah Municipalities show an increase of Rs. 2,937 and Rs. 2,000, respectively. The increased expenditure in Patna is due to the purchase of new conservancy carts and to repair and construction of wells for watering the roads. In the Bhagalpur Division there was an increase in all the municipalities except Bhagalpur and Purnea. The increase of Rs. 692 in Monghyr is reported to have been chiefly due to the more extensive watering of the roads in that town. In the Kendrapara Municipality the expenditure rose from Rs. 358 in 1890-91 to Rs. 1,038 on account of the enforcement of the provisions of Part IX of the Act relative to latrines. In the Puri Municipality a Conservancy Inspector was appointed during the year, paid partly from the Municipal Fund and partly from the Lodging-house Fund.

The average expenditure on conservancy throughout the Province was 30.1 per cent. on the total municipal expenditure excluding debt and suspense heads. Maniktala stands first, for reasons already referred to, with the high ratio of 62.4 per cent.; no other municipality approaches this figure, but seven others spent more than 40 per cent. On the other hand, the municipalities of Chanduria and Cox's Bazar are returned as having spent absolutely nothing

Bazitpur .. 1.6	Muktigacha ... 6.7	Ramjibanpur 8.0
Taki .. 2.7	Meherpur ... 7.02	Lalganj ... 8.8
Debbhatta .. 3.4	Joy nagar ... 7.1	Jahanabad ... 8.7
Khurpai .. 3.6	North Dum-Dum 7.2	Jagdispur ... 9.2
Sherpur .. 3.8	Chakdaha ... 7.3	Chandrakona 9.08
Sitamardi .. 4.1	Goverdanga ... 7.5	Kishoreganj 9.6
Barnipur .. 4.8	Basirhat ... 7.8	Nalchitti ... 9.7
Kumarkhali 6.09	Mohebpur ... 7.9	

on conservancy, and in twenty-three others quoted in the margin the expenditure was less than 10 per cent. Such a small proportion is ridiculously inadequate when the importance of the object is borne in mind.

The total expenditure under this head as shown in the annual accounts

Hospitals and dispensaries.

(Form III) rose from Rs. 2,32,651 in 1890-91 to Rs. 2,58,544. The increase is noticeable in all the Divisions* except those of the Presidency and Chota Nagpur, where there was a slight falling off of Rs. 1,078 and Rs. 484, respectively. One hundred and nineteen municipalities maintained or supported 128 charitable dispensaries, against 126 dispensaries maintained or aided in the previous year by one hundred and eighteen municipalities. A branch dispensary was opened during the year at Ichhapur in the North Barrackpore Municipality, and another was established in the Nadia Municipality consequent on the extension of the Pilgrims' Lodging-house Act to that town. Six municipalities† are relieved of charges on this account, owing to the existence of useful institutions in their midst maintained by private individuals or from endowments. The dispensary at Lohardaga, which received a grant of Rs. 20 a month from the municipality, has been taken over by the Municipal Commissioners from 1st April 1892. Of the dispensaries maintained or supported by municipalities, 87 institutions afforded relief to both indoor and outdoor patients, only outdoor patients being treated in the remaining 41 dispensaries.

		Increase. Rs.		
* Bardwan	...	843		
Rajshahi	...	7,021		
Dacca	...	2,478		
Chittagong	...	2,176		
Patna	...	7,808		
Bhágálpur	...	5,027		
Orissa	...	1,016		

Name of Municipality.	By whom maintained.
† Kalua	Bardwan Raj.
Houghly and Chinsura.	Insambara.
Baranagar	Sagore Dutt endowment.
Netrakona	Zamindar of Gouripur.
Tikari	Tikari Raj.
Dumraon	Dumraon Raj.

The daily average number of indoor patients in all the dispensaries taken together was 1,191·4, of whom 232·21 represented females. In the 127 dispensaries for which complete figures are given, 846,405 outdoor patients were treated, of whom 560,500 were males, 208,423 females, and 77,482 were children. The figures showing males, females, and children treated, whether in the indoor or outdoor wards, are not quite accurate, as in the form prescribed under Government orders of 5th May 1890, in which the divisional returns were submitted, there was no column for showing children, and the figures for children taken from the respective dispensary registers, in which all patients, male and female, under 12 years of age are shown as "children" irrespective of sex, were therefore in many cases included either in the column for "males" or "females."

Taking the Province as a whole, the average municipal expenditure under the head Medical was 9·7 per cent. on the total expenditure. As many as seventeen municipalities spent, nothing at all under this head, while in some, on the other hand, the proportionate expenditure was very large, exceeding 25 per cent. in thirteen cases.

One hundred and forty-two municipalities (i.e., all except Meherpur and Moheshpur in the Presidency Division and Lohardaga in Chota Nagpur) employed 210 vaccinators, at a cost of Rs. 17,818, who performed a total number of 88,871 vaccinations, including 85,071 primary operations and 3,800 re-vaccinations, each vaccinator performing on an average 423 operations. The average cost of a successful vaccination was less than one-third of a rupee. Of the total municipal population 3·1 per cent. received protection during the year in the shape of primary vaccination. Vaccination was not carried on in Meherpur on account of the prevalence of malarious fever. There were two prosecutions under the Act in Noakhali, in both of which the offenders were convicted.

Vaccination.

The total expenditure incurred by municipalities on education was Rs. 1,30,068, against Rs. 1,15,288 in 1890-91, showing an increase of Rs. 14,780. All the Divisions show an increase except Dacca, Chittagong, and Bhágálpur, where there was a slight falling off. The largest increase occurred in Rajshahi, where the expenditure increased from Rs. 8,755 in 1890-91 to Rs. 15,972 during 1891-92, due mainly to the increase of Rs. 2,533 in the expenditure on secondary education and of Rs. 4,330 under "Miscellaneous." The following table summarises the statistics:—

Public Instruction.

CLASS OF SCHOOL.	SCHOOLS MAINTAINED OR AIDED BY MUNICIPALITIES.						OTHER SCHOOLS.			
	Number.	Number of pupils on the rolls at the close of the year.		Expenditure from Municipal funds.		Number.	Number of pupils on the rolls at the close of the year.			
		1890-91.	1891-92.	1890-91.	1891-92.		1890-91.	1891-92.		
1	2	3	4	5	6	7	8	9	10	11
<i>Secondary Education.</i>										
For boys—					Rs.	Rs.				
High schools, English ...	23	54	9,644	10,244	38,671	41,149	100	104	25,968	25,761
Middle " " vernacular ...	23	53	5,105	4,961	12,006	11,889	57	54	4,878	4,971
For girls—										
High schools, English ...	1	1	90	111	130	139	1	1	25	39
Middle " " vernacular ...	8	3	125	138	679	789	1	1	10	11
Total Secondary Schools ...	216	219	23,040	25,709	60,119	70,255	164	166	33,424	35,131
<i>Primary Education.</i>										
For boys—										
Upper primary schools ...	63	87	2,655	3,482	3,447	4,530	72	79	3,003	3,998
Lower " " " " ...	420	613	11,507	22,526	3,889	10,004	870	688	23,036	18,854
For girls—										
Upper primary schools ...	41	42	1,355	1,772	3,864	4,155	18	24	431	557
Lower " " " " ...	93	119	3,704	3,041	3,886	4,054	111	135	3,700	3,364
Total Primary Schools ...	627	861	21,405	30,841	23,895	28,003	1,074	1026	31,480	27,016
<i>Special Instruction.</i>										
Training schools for masters ...	...	...	...	...	...	...	13	12	665	547
Girls-training class ...	...	...	...	...	...	...	7	5	35	31
Technical schools ...	2	2	80	85	476	410	7	7	337	352
Other special schools ...	31	34	527	714	2,014	2,198	30	41	2,363	2,672
Total Special Schools ...	34	38	687	784	2,409	2,605	63	65	3,340	3,542
Inspection ...	...	...	...	...	221	225	...	...	...	...
Buildings and furniture ...	...	...	...	...	678	5,770	...	...	...	...
Miscellaneous ...	...	...	...	...	1,127	1,811	...	...	...	...
Total Municipal Expenditure ...	872	1,108	44,952	59,431	90,790	1,01,712	1,381	1,177	68,226	63,748

It will be seen from the foregoing table that the increase of expenditure occurred under all heads, secondary, primary, and special schools, as also under "buildings and furniture" and "miscellaneous," the small item of "inspection" alone showing a slight falling off. The number of schools wholly maintained by municipalities increased by 5, including 1 secondary, 3 primary, and 1 special (technical) school, and the number of pupils attending these schools increased from 3,698 to 4,078. The number of schools aided by municipalities was 1,059, against 839 in 1890-91, and the number of pupils under instruction in them was 51,193, against 41,284 in the previous year. There was a large reduction of 246 in the number of unaided schools within municipal limits, and the number of pupils attending them fell from 68,206 to 63,748.

There was a slight falling off of expenditure under this head, from

Lighting.

*Burdwan.
Presidency

Rajshahi.
Chittagong.
Patna.

† Division.

* Number of municipal-
ities in which there
were no street
lamps.

	1890-91.	1891-92.
Burdwan ...	11	10
Presidency ...	16	16
Rajshahi ...	...	...
Dacca ...	3	3
Chittagong ...	1	1
Patna ...	4	4
Bhagalpur ...	3	3
Orissa ...	2	2
Chota Nagpur ...	7	6
Total ...	47	44

Rs. 1,43,343 to Rs. 1,39,515. The decrease occurred in the five Divisions named in the margin,* whilst the remaining four Divisions show an increase, the expenditure having more than doubled in the Chota Nagpur Division, where it increased from Rs. 811 in 1890-91 to Rs. 1,796 during 1891-92, owing to the introduction of lighting for the first time into the towns of Parulia and Chaibassa. In the Burdwan Division there was a decrease of Rs. 4,356 in Howrah, as certain bills of the Gas Company were left unpaid, and no new lamp-posts were erected during the year. There was no expenditure on this item in forty-four municipalities,† against forty-seven in the previous year.

Considerable attention was paid during the year to the important questions of water-supply. At Dacca the existing water-works, the gift of Nawab Sir Khwaja Abdul Ghani, Bahadur, K.C.S.I., and his son Nawab Khwaja Ahsanullah, Bahadur, C.I.E., were materially extended by means of a loan sanctioned by Government. The Bardwan Municipality matured a scheme for extending their supply of filtered water, and the question of providing an adequate supply of pure water for the town of Howrah was discussed by the Sanitary Board, but no final conclusion was arrived at. Projects for the water-supply of the group of municipalities on the east bank of the Hooghly in the 24 Parganas were brought forward and considered by the Sanitary Board. Rajpur and Jessore both propose to take a loan for this purpose. In Kurseong and Nasirabad the work has already made great progress. The artificial lake which supplies the town of Chaibassa with water was re-excavated and cleared out by the Commissioners during the year. The large decrease of Rs. 59,581 in capital outlay under this head was due to the extension of the water-works at Dacca in the previous year undertaken by means of a loan from Government. The expenditure of Rs. 50,703 was incurred for the most part in Bardwan, Barjeeling, Kurseong, Dacca, Nasirabad, and Gaya. The cost of establishment, repairs, &c., advanced from Rs. 28,217 to Rs. 39,073, a result inseparable from larger operations.

The total cost of maintaining roads was Rs. 4,32,600. This item was not separately shown in the previous year's accounts, and the expenditure during the two years cannot therefore be compared. The total length of different kinds of roads maintained by municipalities (except Bhadreswar, for which no information has been furnished) during the year was 2,010 miles and 1,364 feet, including 587 miles and 684 feet of embanked, bridged, and metalled roads, 495 miles and 3,735 feet of embanked and bridged roads not metalled, and 927 miles and 2,225 feet of all other classes of roads. The total cost (Rs. 3,79,333) differs widely from the amount shown in the annual accounts. The figures of the Chittagong Division alone agree, the largest discrepancies having occurred in the Presidency Division (Rs. 19,887), Bhagalpur (Rs. 15,380), Dacca (Rs. 7,827), and Bardwan (Rs. 7,103).

In the matter of studentships, the only municipalities which actually contributed towards the support of a female student at any Government Medical School were those of Bardwan, Serampore, and Rampur Boalia. The municipality of Bardwan spent Rs. 91 during the year on this account, and the Serampore Municipality paid Rs. 4 a month to a student of the Campbell Hospital. The Commissioners of the Rampur Boalia Municipality have awarded a scholarship of Rs. 10 a month tenable for three years, on the understanding that the holder shall practise in the municipality on the completion of her studies. The municipalities of Kalna, Katwa, and Revelganj offered stipends to female medical students, but no candidate came forward to avail herself of these contributions. As to female medical help, the Bardwan Municipality expended Rs. 116 on the pay of a female doctor at the Municipal Dispensary. The Municipal Commissioners of Hooghly and Chinsara resolved to employ a trained midwife on Rs. 20 a month, but no one could be found to serve on that pay. There is a midwife in service at Sirajganj. Of the other municipalities in the Rajshahi Division, some bring forward, as in previous years, the plea of want of funds, while others say that no female student came forward. There was a midwife attached to the Barisal Municipal Hospital for nearly nine months of the year on a salary of Rs. 30 per mensem. A trained nurse is employed in the lying-in hospital attached to the Bankipore dispensary, and another midwife has been entertained by the Muzaffarpur Municipality on a salary of Rs. 40 per mensem, on condition that half of the fees earned by her in private practice will go to the municipal fund. In Darbhanga there is a Lady Dufferin Hospital maintained by the Darbhanga Raj, where facilities exist for females to learn midwifery and the treatment of diseases peculiar to their sex. The Commissioners of the Monghyr Municipality employ a midwife in the Municipal Hospital, but at the suggestion of the Inspector-General of Civil Hospitals arrangements are now in progress for replacing her by a female Hospital Assistant. There is a dispensary for females at Cuttack, called the Lady Thompson Female Dispensary, which is not recognised by the Municipality, nor

aided from its funds. Attempts are being made by the Municipal Commissioners of Khulna to raise subscriptions for building a zenana hospital, but they have not met with much success yet. The District Board of Champaran have promised to contribute Rs. 500 towards the cost of a ward for females at the Motihari dispensary, and an attempt will be made to raise the balance of the sum required for the work by private subscriptions.

The Act is in force in the towns of Puri, Chandbally, Ulubaria, Garhbeta, Deoghur, and Gaya, and was introduced during the year into Nadia and Danton. The collections of the year including the opening balance were Rs. 31,152, against Rs. 30,156 in 1890-91. Out of this sum Rs. 23,333 were expended, leaving a balance of Rs. 5,819 in hand.

Working of the Pilgrims' Lodging house Act IV of 1871.

General working of the Municipal Act.

Speaking generally, the Lieutenant-Governor is glad to recognise some advance in the municipal administration of the year: something has been done to raise larger funds and to improve sanitation in many towns where it was defective, and the discussion of the proposed amendment of the Municipal Act has shown that considerable attention is devoted to the details of municipal business. But it would be idle to deny that much still remains to be done: the great cardinal principles of successful municipal administration are not yet sufficiently grasped. Assessments are still made with inequality, and when regard is had to the requirements of the people, with too great leniency: collections are not enforced with vigour and punctuality, and, owing to a mistaken gentleness, in many cases municipal servants are in arrears, and the whole administrative machinery is thrown out of gear: the great needs of rich and poor alike, thorough conservancy, good drainage and a pure water-supply are often neglected, and in some parts of the country there is a tendency to devote to secondary education for the benefit of a few the hard-earned contributions of the many. Many of these faults are common to municipal administration all the world over, and are not peculiar to India or Bengal. Sir Charles Elliott indicates them that they may be met and combated, and he hopes that when it becomes the duty of Government again to review the proceedings of the municipalities in these Provinces, he may find an advance along all the paths of progress, more efficient administration, and more evidence of the capacity of the educated classes for self-government.

WORKING OF DISTRICT BOARDS.

The year under review was the sixth in which the Bengal Local Self-Government Act III of 1885 was in operation. There was no change in the constitution of District or Local Boards. As in previous years, there were 38 District and 106 Local Boards, the area under their jurisdiction being 110,043 square miles, with a population according to the last census of 61,787,908. All the District Boards were presided over by an official Chairman, who is the Magistrate of the district.

The 38 District Boards in Bengal at the close of 1891-92 contained 790 members, including the Chairmen. Of the total number of members, 168 held their seats *ex-officio*, 313 were nominated by Government, and 309 were elected by Local Boards. The number of Europeans and Eurasians was 197, and of natives of the country 593. These figures give the following percentages as compared with those for 1890-91:—*Ex-officio* members 21·26, as against 23·45; nominated members 39·6, as compared with 35·81; representative members elected by Local Boards 39·1 to 40·73; and Europeans and Eurasians 24·03 to 25·22. The balance of power in the Boards has therefore practically remained unchanged.

The total number of meetings held by the District Boards was 512, the average number for each District Board being 13·4, against 12·6 last year. The largest number of meetings (24) was held by the Saran District Board; the Dinajpur and Pabna District Boards come next with 19 meetings each; while Darbhanga and Puri show 18 meetings each. The Boards which met least often were Jalpaiguri and Rajshahi, showing 8 and 9 meetings, respectively.

Taking all the Boards together, the average attendance of members at each meeting was 9·61, against 9·68 in 1890-91. It was best in the following

districts, where it amounted to or exceeded one-half of the total number of members:—

Bankura,	Bogra,
Birbhum,	Pabna,
Midnapore,	Backergunge,
Howrah,	Tippera,
24-Parganas,	Noakhali,

Chittagong,

and bad in Murshidabad, Dinajpur, Jalpaiguri, Cuttack, and Puri. In Jalpaiguri it was below one-third of the actual strength of the Board.

There were 1,248 members, inclusive of the Chairmen, in the 108 Local Boards in Bengal. Of these 40 held their seats *ex-officio*, 739 were nominated by Government, and 469 were elected members. The number of official members was 154, and of non-officials 1,094. There were only 105 European and Eurasian members in the Local Boards, the rest being natives of India.

The total number of meetings held by the Local Boards was 961, against 882 in 1890-91, being an average of nine meetings for each Local Board. The Local Boards noted in the margin held more than one meeting a month, while as many as eighty-six Boards failed to meet once a month. The Local Boards which met least often were Alipore, which held three, and Barrackpore, Bagerhat, Dacca, Gopalganj, Kishanganj, and Puri, which held four meetings each. The average attendance at the meetings of Local Boards was 5.15, against 5.11 in 1890-91.

The following table classifies the members of the several District and Local Boards according to their professions and occupations:—

NAME OF DIVISION.		Government servants.		Zamindars, talukdars and zamindars' servants.		Pleaders and mukhtars.		Pensioners.		Miscellaneous.		Government pensioners.		Other occupations.		Total number of members.
		No.	Ratio per cent.	No.	Ratio per cent.	No.	Ratio per cent.	No.	Ratio per cent.	No.	Ratio per cent.	No.	Ratio per cent.	No.	Ratio per cent.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Burdwan Division	District Boards	31	10	30	27.5	33	30	8	4.5	1	0	3	2.7	8	4.5	134
	Local Boards	28	14.5	101	44.9	31	14.4	2	0	1	0	7	2.9	26	12.5	244
Presidency Division	District Boards	56	32	31	24.4	24	18.3	10	8.3	1	0	2	1.7	8	7.5	169
	Local Boards	19	7.8	118	55.6	80	25.7	11	4.4	1	0	0	0	87	30.8	248
Rajshahi Division	District Boards	33	31.0	38	37.4	30	18.4	7	8.4	1	0	1	0	17	11.9	164
	Local Boards	10	16.5	51	63.7	10	20	1	1.1	...	...	...	...	14	14.7	94
Dacca Division	District Boards	31	29.8	38	21.0	40	34.1	...	...	...	...	3	2.5	8	4.8	164
	Local Boards	34	14.5	77	74.8	78	31.4	...	...	...	...	1	0	13	8.7	160
Chittagong Division	District Boards	18	28.5	18	51.4	15	21.4	4	7.3	...	...	...	...	1	1.9	51
	Local Boards	5	16.5	14	81.0	3	29.6	...	...	...	...	...	...	...	...	38
Pabna Division	District Boards	35	31.7	44	25.4	28	15.3	...	...	...	...	...	...	...	...	168
	Local Boards	31	14.7	119	65.3	34	19.7	27	12.1	...	...	...	...	...	...	239
Bhadrabad Division	District Boards	10	24.21	33	25.18	19	20.21	54	14.80	...	...	1	1.08	8	8.01	94
	Local Boards	10	7.25	61	46.18	24	18.6	11	8.62	...	...	1	0.77	26	18.5	99
Orissa Division	District Boards	21	40	11	21	18	20	...	...	...	...	4	8	3	4	88
	Local Boards	19	24.5	31	26.7	17	21.7	...	...	...	...	4	2.1	8	8.1	79
Grand Total		114	31.5	397	38.1	178	21.8	70	3.4	4	0	18	1.9	68	2.6	700
		128	12.5	395	17.7	289	27.4	63	4.1	4	0	18	1.5	136	8.9	1,400

Of the entire number of members (700) in District Boards, 31.5 per cent. were Government servants; 28.9 were zamindars and talukdars; 25.6 were pleaders and mukhtars. Of the total number of members (1,248) of Local Boards, 47.7 were zamindars, talukdars, or zamindars' servants, 23.8 were pleaders and mukhtars, and 12.5 Government servants. In the District Boards Government servants furnish the largest proportion owing greatly to the number of official Chairmen. In the Local Boards the landed interest is most largely represented, and the percentage of Government servants is very small. The proportions in each case are virtually the same as in 1890-91.

There has been little change in the powers delegated to Local Boards, but these powers vary a good deal in different districts. They continue in almost every district to administer the grants for village roads and to control pounds; in seventeen districts they are invested with powers over primary education, and in twelve with the control

of ferries: in eight districts they undertake the maintenance of unmetalled minor district roads, and in five their connection with education is extended to middle schools. In Bhágalpur all the dispensaries are under their charge, while in Jessore, Backergunge, Purnea, and Balasore, this control is only partial. In Pabna, Faridpur, Mymensingh, Monghyr, and Cuttack, the construction and maintenance of tanks and wells is part of the duties of the Local Boards, and in Faridpur, Patna, and Shahabad their powers extend to the control of sanitation and the relief of the sick.

The following table compares the income and expenditure of the District Boards in Bengal for 1890-91 and 1891-92:—

INCOME.			1890-91.	1891-92.
			Rs.	Rs.
I.—Land revenue	...	...	33,837	33,829
VI.—Provincial rates	...	...	33,38,524	35,10,235
XII.—Interest	...	...	569	453
XVII.—Police (including pounds)	...	...	4,43,775	4,72,187
XIX.—Education	...	...	33,496	37,803
XX.—Medical	...	...	7,045	10,006
XXI.—Scientific and other Minor Departments	...	...	1,425	3,123
XXX.—Miscellaneous	...	...	1,31,538	1,55,633
XXX.—Irrigation—Minor works and navigation	...	...	Nil	410
XXXII.—Civil works (including ferries)	...	...	3,73,379	4,18,759
Contributions	...	...	8,13,129	8,01,509
Debt	•	...	6,91,111	7,69,377
Total	•	...	58,67,818	62,13,324
EXPENDITURE.				
1. Refunds	...	...	4,936	93
18. Administration	...	...	2,65,885	2,82,895
20. Police pounds	...	...	29,618	33,874
22. Education	...	...	10,01,855	11,05,375
24. Medical	...	...	58,519	76,323
26. Scientific and other Minor Departments	...	...	3,665	8,016
29. Superannuation allowances and pensions	...	...	23,828	3,459
30. Stationery and printing	...	...	46,446	48,527
32. Miscellaneous	...	...	46,636	40,890
33. Famine relief	...	...	1,21,034	12,675
41. Railways	...	...	171	Nil
43. Minor works and navigation	...	...	7,763	13,181
45. Civil works	...	...	39,37,161	40,43,238
Contributions	...	...	6,145	5,130
Debt	...	...	5,75,891	6,12,636
Interest on debt	...	...	Nil	5,345
Total	•	...	61,29,603	62,91,667

The year 1891-92 opened with a balance of Rs. 16,71,495, and the total amount available for expenditure was Rs. 78,84,819, against Rs. 78,01,109 in the previous year. The closing balance was Rs. 15,93,162.

The income under this head remained nearly unchanged as compared with that of the previous year. Of the total income Rs. 12,444 represent canal tolls in Chittagong, and Rs. 8,290 the sale proceeds of trees and grass, &c. The fees received for collecting road cess arrears were Rs. 12,551, and other fees, fines, and forfeitures amounted to Rs. 544.

The receipts under this head increased from Rs. 33,38,524 to Rs. 35,10,235, chiefly owing to the better collection of road cess during the year under report: it appears from the Resolution on the Board's Cess Report that the percentage of the current demand collected in 1891-92 was 83·3, as against 81·8 in 1890-91. The increase is noticeable in every division, with the exception of Burdwan, where there was a decrease of Rs. 10,907. The increase was highest in the Patna Division (Rs. 1,01,844), and is attributed to improved collections generally and to the complete revaluation in Muzaffarpur. Dacca comes next with an increase of Rs. 29,506, followed by the Presidency and Bhágalpur Divisions with about

Rs. 14,000 each, while Rajshahi and Orissa contribute about Rs. 10,000 each, and Chittagong a little over Rs. 3,000.

Pounds.		Rs.	
Rajshahi	...	9,869	Rs. 4,43,775 in the previous year, showing a net increase of Rs. 28,412. The increase was distributed among the divisions named in the margin, Dacca alone showing a decrease amounting to Rs. 3,461. The Commissioner of that Division explains the decrease as being due to the losses of farmers in previous years and to more strict supervision.
Blugulpur	...	9,267	
Presidency	...	4,942	
Burdwan	...	3,588	
Orissa	...	2,537	
Palna	...	1,457	
Chittagong	...	199	
		<u>31,873</u>	

A prominent feature of the year's administration has been the appointment or retention in nine districts of Inspectors of pounds, sometimes for this duty alone, and sometimes for the inspection of ferries also. This measure was adopted simultaneously in districts so widely differing as Tippera and Champaran, Rajshahi and Cuttack, and since the close of the year it is believed to have been extended to Jessore, Dinajpur, Shahabad, and Saran.

The acquisition of sites for pounds is a question which has come into prominence during the year. So long as pounds were managed by the police, they were situate on ground the property of Government in close proximity to police-stations and outposts, but now that this tie has been severed, and the farming system considerably developed, the difficulty of obtaining sites is often a real one, and the farmer has sometimes, after taking the lease of the pound, to pay heavily for a place to establish it. It may be necessary in future for the District Board to acquire sites for pounds, and perhaps to erect and maintain the buildings themselves.

The Government of India having suggested that the system of farming out cattle-pounds was in some respects open to objection, the question of the continuance of this practice was carefully considered in consultation with district and divisional officers, who reported on the matter at great length. The Lieutenant-Governor's conclusion, in reviewing the whole subject, was that the increase in the number of pounds effected in recent years had been very advantageous to the people; that such increase was only possible under the farming system; that the system of direct management could only be properly worked at thánas, subdivisional head-quarters, &c., under the eye of officials, and could not properly be applied to outlying villages, where constant supervision over the pound-keeper is impracticable; that there is no reason to insist upon direct management being introduced even at head-quarters of thánas, inasmuch as all the charges brought against the farming system are equally applicable to the direct system so long as it is possible for the paid pound-keeper to embezzle the receipts and not to enter them in his books; and that the attempt now to go back to the system of direct management would inflict on the revenues of the District Boards a heavy loss. These views having been laid before the Government of India, they have agreed to leave the matter to the discretion of the Lieutenant-Governor, who is about to issue orders providing for the better inspection of pounds, and for the introduction of revised forms and registers—measures which will, it is hoped, while interfering as little as possible with the farmers, provide effectually against the abuses alleged to be inherent in the farming system.

The total income from this source was Rs. 37,803, against Rs. 33,496 in 1890-91. The increase occurred in all the Divisions except those of the Presidency and Orissa. The increase was highest in the Rajshahi Division, being Rs. 1,950, of which the district of Rangpur alone contributed Rs. 1,107, representing donations from Raja Gobinda Lal Rai Bahadur towards the maintenance of the technical school throughout the year, as well as schooling fees realised from the students of the same school. In the Orissa Division the decrease in the district of Cuttack is attributed to the cyclone of November last, which led to the closing for some time of several schools managed by the Board.

The receipts under this head were Rs. 10,006, as compared with Rs. 7,035 in 1891-92, showing an advance of Rs. 2,971, chiefly due to an increase in private contributions (Rs. 2,661) during the year.

Medical.

The receipts under this head, which increased from Rs. 1,425 to Rs. 3,123, have not been noticed in their reports by any of the Commissioners except the Commissioner of Dacca. In Dacca the sum of Rs. 470 represents the amount realised from the zamindars of the Kartick Baroni Fair on account of conservancy arrangements.

The receipts were Rs. 1,55,633, against Rs. 1,31,538 in the previous year. The slight falling off in the receipts from "Staging bungalow" and "Serai" fees was, especially in districts where revaluation proceedings were in progress, more than covered by a considerable increase under "Miscellaneous," including fees, fines, and forfeitures. There was also an increase on account of sale proceeds of old stores and materials, and a considerable sum was realised in Cuttack by the sale of trees uprooted by the cyclone of November 1891.

The total receipts were Rs. 4,18,759, against Rs. 3,73,379. The receipts from tolls and ferries, which are the main source of income under this head, were Rs. 3,75,664, as compared with Rs. 3,38,55 showing an increase of Rs. 37,106. The increase was shared by all the Divisions, and was highest in the marginally-noted districts. In Jalpaiguri the large increase is attributed to the adjustment of outstanding balances of deposits received from the ferry farmers. In Burdwan, Champaran, and Howrah the advance is due to better collections of the gross demand, while a better settlement accounts for the increase in Monghyr and Malda. In Patna, Mymensingh, and Tippera there was an increase in the number of public ferries. In Cuttack the advance is attributed to a contribution received on account of municipal ferries.

Since the year when the ferries were divided between Government and the District Boards, the revenue credited to Local Funds has risen from Rs. 2,96,076 to Rs. 3,75,664, thus fully justifying the assertion so often made by Government, that the ferry revenue was an improveable one.

The income from this source was Rs. 8,01,509, against Rs. 8,13,129, being a decrease of Rs. 11,620. Contributions. The total receipts under this head, which includes deposits made by farmers of pounds and ferries, and contractors, and the recovery of advances, rose from Rs. 6,91,111 to Rs. 7,69,377 in 1891-92.

Only one new loan was granted, and the disbursement of two loans previously sanctioned were completed during the year. The Dinajpur District Board drew the second instalment, Rs. 40,000, of the loan of two lakhs referred to in the Resolution for 1890-91. The Patna District Board also drew the second or last instalment of the loan of Rs. 80,000 for the construction of bridges on the roads between Bakhtiarpur and Bihâr and between Masourhi and Pabhera. A loan of Rs. 50,000 was granted to the District Board of Saran to enable them to meet the heavy and unexpected expenditure which they were obliged to incur in consequence of the damage done to the roads of the district by the floods of August 1890.

The expenditure under this head amounted to Rs. 2,82,895, against Rs. 2,65,885 in 1890-91, showing an advance of Rs. 17,010, and a ratio of 5.2 per cent. on the ordinary income of the Boards. Excepting the Presidency and Orissa Divisions, all the Divisions show an increase, which was greatest in Patna and Chittagong. In the Patna Division the advance is attributed chiefly to the annual increment granted to District Boards' employes, to an increase in the cost of audit and treasury establishments, to heavier charges for the travelling expenses of members of District Boards, and in Darbhanga to an increase of Rs. 100 per mensem in the pay of the Secretary, and Rs. 300 granted as arrear pay for part of the previous year. The increase in Chittagong is due to a large sum advanced for law charges in a suit brought against the District Board by the contractor for the construction of their office building: the case is still pending. The increase in the other

Divisions calls for no remarks, being mainly due to the increased pay of office establishment.

The establishment of Provident Funds, which was recommended to District Boards by the orders of Government, dated the 12th January 1891, has been very generally carried out during the year. During 1890-91, three District Boards, viz., those of Patna, Muzaffarpur, and Monghyr, adopted the Provident Fund scheme, and secured the approval of Government to their rules. Their example was followed during 1891-92 by the Boards of Burdwan, Howrah, Nadia, Murshidabad, 24-Parganas, Dacca, Faridpur, Backergunge, Gaya, Shahabad, Darbhanga, Saran, and Purnea. In several other districts the rules have been sanctioned since the close of the year, and in others matters are in train for the adoption of the system. Provident Funds have been actually established and are in working order only in Patna, Muzaffarpur, Monghyr, Purnea, and Malda. The adoption of Pension Rules has been delayed in a still greater degree, only ten districts having accepted them up to the 31st March 1892.

The charges under this head amounted to Rs. 33,874, as compared with Rs. 29,618 in the previous year. The small increase (Rs. 4,256) is mainly due to the construction of new pound buildings in certain districts and to the appointment of pound inspectors.

The total expenditure incurred by the District Boards on education was Rs. 11,05,375, against Rs. 10,01,855 in 1890-91, showing an increase of Rs. 1,03,520. The following table shows, in a comprehensive form, for each District Board in Bengal, its total ordinary income during 1891-92, the actual expenditure, *first*, on primary education only, and *secondly*, on education generally, and the ratio per cent. which each bears to the income of the Board:—

District.	Ordinary income in 1891-92.	EXPENDITURE ON—		PERCENTAGE ON ORDINARY INCOME OF EXPENDITURE ON—	
		Primary education.	All education.	Primary education.	All education.
1	2	3	4	5	6
	Rs.	Rs.	Rs.		
Burdwan	2,30,144	21,819	48,573	9.4	21.5
Bankura	90,110	15,441	31,030	17.1	34.4
Birbhum	78,204	8,278	19,824	10.5	25.3
Midnapore	2,01,157	35,532	65,226	17.2	32.1
Hooghly	1,62,050	27,640	48,003	17.0	30.2
Howrah	57,618	9,153	20,458	15.9	35.5
24-Parganas	2,55,860	21,168	42,127	8.2	16.4
Khulna	92,864	12,339	27,920	13.2	30.1
Nadia	1,05,665	11,081	31,832	10.4	30.1
Jessore	1,61,008	27,013	55,046	16.4	33.5
Murshidabad	91,074	9,847	20,345	10.7	22.1
Hinajpur	1,18,500	7,829	29,075	6.0	24.5
Rajshahi	99,523	12,767	25,442	12.7	25.5
Rangpur	1,74,728	10,097	42,439	5.2	24.2
Bagra	80,848	4,541	14,787	7.8	24.3
Pahna	76,530	12,518	27,468	16.4	35.8
Jalpaiguri	1,14,700	8,467	10,873	7.0	9.4
Dacca	1,21,782	18,305	42,218	14.7	34.1
Faridpur	87,542	12,026	20,321	12.3	20.9
Backergunge	1,57,078	18,074	30,412	11.4	24.2
Mymensingh	2,30,758	19,396	46,862	8.0	19.5
Tippura	1,41,279	22,777	39,417	16.1	27.9
Noskhali	1,10,107	13,638	25,487	12.3	23.1
Chittagong	1,30,988	7,869	21,713	6.0	16.5
Patna	2,16,254	15,080	24,150	7.3	11.1
Gaya	2,75,484	16,712	21,690	5.7	8.6
Shahabad	2,18,954	10,235	16,062	4.6	7.6
Darbhanga	2,01,704	14,553	18,690	7.2	9.2
Muzaffarpur	2,16,887	12,410	18,180	5.7	8.3
Saran	1,79,844	13,734	21,375	7.6	12.2
Champanan	1,22,924	10,817	17,799	8.6	14.4
Monghyr	1,71,450	13,807	24,548	8.0	14.3
Rhagulpur	1,61,709	7,459	18,750	4.6	11.5
Purnea	1,30,048	8,162	17,083	5.9	12.4
Malda	65,298	5,367	15,270	9.7	27.6
Chutuck	1,15,738	18,421	37,398	15.9	32.3
Badassore	65,494	11,251	27,828	17.2	42.4
Puri	55,151	8,268	16,624	9.5	29.0
Total	63,71,101	5,32,168	11,05,375	9.9	20.5

Taking the Province as a whole, it appears that one-fifth of the Board's income was expended on education, and that about half of this amount was

devoted to primary schools, but the correctness of the latter figure is open to much doubt, as some of the expenditure on these schools has evidently been shown under "Grants-in-aid."

Action was taken for the first time under section 64 of the Bengal Local Self-Government Act III of 1885, providing for the transfer of high English schools under public management to local bodies. By a notification, dated the 18th November 1891, the maintenance and management of the high English school at Monghyr were entrusted to a joint-committee, consisting of ten members, five delegated by the District Board of Monghyr, and five by the Commissioners of the Municipality. The cost of maintenance is to be paid by the Municipal Commissioners and the District Board, respectively, in the proportion of four to five.

In Midnapore the Mysadal Raja's technical school was transferred to

the management of the District Board during the year. The Board contributed Rs. 50 towards its maintenance, in addition to the monthly grant of Rs. 50 from Government. A passed student of the Sibpur Engineering College is the head-master of the institution, and the number of students on the roll increased from 21 to 49 under the Board's management. Towards the close of the year the Howrah District Board founded two scholarships of Rs. 8 a month each, tenable for two years, at the Sibpur Engineering College. The sum of Rs. 10 only was paid during the year. On the 31st March 1892 the number of students in the technical school at Rangpur was 60, against 71 in the previous year, but the average monthly attendance was 69, against 67 in 1890-91. Nine students passed last year, all of whom obtained employment as sub-overseers, draftsmen, or surveyors under District Boards and zamindars. The total value of the articles made by the students during 1891-92 amounted to about Rs. 1,600, and the net profit derived from the workshops was Rs. 104. The expenditure for the school during the year was Rs. 5,512, against Rs. 2,368 in the preceding year, the increase being principally due to the entertainment of a Superintendent at Rs. 150 a month, as well as to the purchase of some valuable tools for the workshops. The increased expenditure did not, however, burden the District Fund, as the Board received from Government a contribution of Rs. 1,000 for the purchase of tools and plant, and Rs. 80 a month towards the pay of the Superintendent. A technical school was established in Purnea in January last: it is attended by 15 boys, under the instruction of a teacher in carpentry, who received a salary of Rs. 25 a month: an allowance of Rs. 4 a month was also paid to each of these boys. At Comilla, the Artizan Workshop has been at work since December 1890, teaching carpentry and blacksmith's work. On the 31st March 1892 there were 18 boys on the roll of the school, 7 in the smiths' and the rest in the carpentry class. Twelve scholarships of Rs. 4 each have been awarded to the boys of the workshop. The District Board continued to award two scholarships of Rs. 15 each, tenable at the Sibpur Engineering College, for natives of the district of Tippera. A scholarship of Rs. 10 a month, tenable at the Sibpur Engineering College for five years, was created by the Noakhali District Board in 1890, and was awarded to a native of the district who had passed the F.A. examination.

This cause has been furthered by the District Boards during 1891-92 in

Female Medical Education.

two ways—either by grants to local hospitals and dispensaries towards the training of midwives entertained by them, or by the offer of scholarships. In regard to the first measure, the District Board of Gaya takes the foremost place with an expenditure of Rs. 669 during the year in the training of midwives at the Gaya Pilgrim Hospital. The Bardwan Board granted Rs. 12 a month to the local municipality for the same purpose. The Cuttack District Board made a grant of Rs. 100 to the Lady Dufferin Fund for the furtherance of female medical education. Offers of scholarships to female students of obstetrics were made on very liberal terms, but without success, by the District Boards of Burdwan, Bankura, Rajshahi, Dinajpur, Pabna, and Champaran: in other districts greater success has been obtained. The Midnapore Board paid a scholarship of Rs. 10 to Miss Kadambini Mukerjee, a student of the Campbell Medical School, for six months of the year. The District Board of Saran awarded a scholarship of Rs. 10 a month to Mrs. Kadambini Banerji, a female student of the same school, who

has guaranteed to serve under the Board for at least as many years as she has received the stipend: it was proposed to confer the scholarship on a Bibari, but no candidate came forward. In Birbham and Tippera, the District Board finding after prolonged trial that their invitations met with no response, have abandoned the provision of scholarships of this class.

The total expenditure under this head increased from Rs. 58,519 to Rs. 76,323. The increase is noticeable under all the sub-heads.

Medical.

Besides maintaining dispensaries entirely at their own expense, the District Boards have contributed to dispensaries already established, and have made special grants for other purposes to so great an extent that, while the total sum expended by them in the Province on their own dispensaries has been only Rs. 26,782, they have disbursed under the general head of "Medical" as much as Rs. 76,323. Some of the objects on which their funds have been expended have already been mentioned under the head of Female Medical Education. Grants towards the support of midwives have been made by the District Boards of Patna and Noakhali. To the Dufferin Fund a liberal contribution for a lady doctor was made by the District Board of Gaya (Rs. 1,200), together with a sum of Rs. 2,200 for a site for her residence, and the Chittagong District Board paid Rs. 130 a month for the same purpose. For aid in epidemics of cholera grants were voted in Rangpur, Backergunge, Patna, Shahabad, and Saran. There was some expenditure on sanitation in Bankura and Saran. The Mymensingh District Board imitated the example of Tippera by advertising that wherever the people of any locality would provide Rs. 20 or Rs. 25 a month, the District Board would grant an equal amount for the establishment of an outdoor dispensary. The example is one which might well be followed elsewhere. Large grants have been made in aid of municipal and subdivisional dispensaries by about half the districts in which the Local Self-Government Act is in force.

For the improvement of sanitation during the year the District Boards in the Patna Division expended the largest amount

Sanitation.

(Rs. 11,361-12-3), and those of the Chittagong Division the lowest (Rs. 916). The efforts of the District Boards in the matter of sanitation were directed chiefly to the construction and repairs of wells, and to the excavation of tanks, the total amount expended on these objects being Rs. 37,278.

In the Bardwan Division, the Birbham District Board made sanitary arrangements for the fairs at Joydebkendoli, Bakreswar, and Birchandpur. The District Board of the

Sanitation at fairs.

24-Parganas, in the Presidency Division, expended Rs. 1,705 for the sanitary and conservancy arrangements of the fairs held at Sagar Island in the Diamond Harbour subdivision, and at Harwa in the Basirhat subdivision. In Dacca the District Board incurred an expenditure of Rs. 631-3 and Rs. 48-9-10 for sanitary and conservancy improvements at the Kartik Baroni and Nangabund fairs respectively. The District Board of Saran, in the Patna Division, spent Rs. 4,000 on sanitary arrangements at the different fairs held in that district, the greater part of which was expended at Sonapore.

The expenditure under this head amounted to Rs. 48,527, against Rs. 46,446 in the previous year. The increase, which occurred

Stationery and Printing.

in all the Divisions, with the exception of those of the Presidency and Patna, is attributed in some districts to the payment of bills during the year for supplies received in the previous year, and to the large purchase of prescribed forms in others. The Commissioner of Bardwan observes that most of the District Boards have a tendency to incur unnecessary expenditure under this head, and that he was obliged to curtail the provisions made in some of their budgets.

The expenditure under this head decreased from Rs. 46,686 to Rs. 40,890.

Miscellaneous.

There was an increase of Rs. 400 under sub-head "Donations for charitable purposes," due to the contribution made by the Champaran District Board towards the cost of dispensaries and medical relief. This expenditure should have been shown under Medical. The expenditure under head "Miscellaneous refunds" declined from Rs. 14,980 to Rs. 4,261.

The only Divisions in which expenditure was incurred under this head were those of Rajshahi, Patna, and Bhágalpur. In

Famine Relief.

the Rajshahi Division no regular relief operations were needed in any district except Dinajpur, where a sum of Rs. 10,000 was set apart for affording relief to landless labourers, who in ordinary years live by labour under jotdars on petty cultivation. Out of this amount Rs. 6,471 was spent during the year: the main portion of it was spent in improving roads on the piece-work system, and has been dealt with under the head "Civil Works." Only Rs. 1,250 is shown under "Famine Relief," of which Rs. 11 was spent in Rangpur on test operations. In the Patna Division Rs. 2,529 were spent on famine relief in the districts of Muzaffarpur, Darbhanga, and Champaran. Of this amount Rs. 283 were spent in Muzaffarpur, Rs. 2,126 in Darbhanga, and Rs. 110 in Champaran. Over and above these sums advances of Rs. 20,000 and Rs. 10,000 were made in Muzaffarpur and Darbhanga at the close of the year, the adjustments of which will be made in the accounts of the current year. In the Bhágalpur Division the total expenditure incurred under this head amounted to Rs. 8,896, viz., Rs. 423 in Moughyr, Rs. 1,188 in Bhágalpur, and Rs. 7,285 in Farná. In the Dacca Division no relief operations were called for in any district, but in Faridpur a sum of Rs. 150 was advanced in loans. This amount, together with the sum of Rs. 787 out of Rs. 1,400 advanced in 1890-91, was recovered during the year. In the Orissa Division a sum of Rs. 300 was advanced in the month of March to provide employment for the people of Astrang, in the Puri district, who suffered from the effects of the cyclone. Half of this amount was recovered from the zamindars of the distressed locality and from the owners of the tank on which the labourers were employed.

In the revised edition of the Bengal Famine Code, which was issued at the end of the year, the duties of District Boards in times of scarcity and famine were defined, and it is hoped that in future no doubt will be felt as to the nature and extent of their obligations in this respect.

The following table shows the Public Works expenditure under the several Civil Works heads as compared with that of 1890-91 :—

YEAR.	In charge of Civil Officers (ferry establishment, &c.)	Original works.	Repairs.	Establishment.	Tools and plant.	Water-supply and water-works.	Drainage works.	Total.
1	2	3	4	5	6	7	8	9
1890-91	Rs. 64,105	Rs. 11,83,498	Rs. 20,16,580	Rs. 5,63,146	Rs. 20,759	Rs. 34,212	Rs. 51,495	Rs. 30,37,161
1891-92	38,459	15,85,506	20,55,497	5,61,161	20,171	34,147	9,556	40,43,238

There was an increase in the total expenditure exceeding a lakh of rupees: it is shewn under the heads of "Original Works" and "Repairs." The decrease under the head "Drainage" was due to the large payments made in the districts of Dinajpur (Rs. 1,042) and Rangpur (Rs. 49,898) for drainage works executed in the previous year. A large outlay on account of original works was incurred by the Dinajpur District Board in the year under review—43 permanent bridges and culverts, aggregating 524 feet, having been constructed at a cost of Rs. 40,000. In Chittagong several iron and timber bridges have been constructed or reconstructed, and three wooden jetties were erected on the bank of the Bagkhali river at the ferry ghats. The expenditure under the head "Original Works" decreased in every district in the Bhágalpur Division, owing to the several District Boards reserving large sums for famine works.

A most expensive work, taken up by the Burdwan District Board towards the close of the year, was the construction, at an estimated cost of Rs. 67,995, of the Victoria Bridge over the river Khenry at Karjona on the Burdwan to Katwa road. Messrs. Burn & Company have taken the contract for the work.

During the year 22,308 miles of roads of all kinds were maintained by the

District Roads.

District Boards in Bengal at a cost of Rs. 26,97,002. Of the total length 3,362 miles were embanked, bridged, and metalled roads, 12,023 miles were embanked and bridged, but not metalled, and 6,923 miles not embanked or bridged. Of the total cost,

Rs. 10,81,607 were expended in original works, and Rs. 16,15,395 in repairs. The expenditure on account of embanked, bridged and metalled roads was highest (Rs. 4,13,095) in the Patna Division, Burdwan coming next with Rs. 3,45,311, and Chittagong showing the lowest expenditure, Rs. 12,148. The outlay on roads that are embanked and bridged, but not metalled, was highest in the Rajshahi Division (Rs. 3,06,818), and lowest in Orissa (Rs. 40,011). The outlay on roads that are not embanked or bridged was highest in the Patna Division (Rs. 55,277), and lowest in the Orissa Division (Rs. 8,097).

Village Roads.

The following table compares the total expenditure on village roads for 1890-91 and 1891-92:—

		1890-91.	1891-92
		Rs.	Rs.
Burdwan Division	...	30,420	35,245
Presidency Division	...	47,820	57,127
Rajshahi Division	...	19,311	20,250
Dacca Division	...	68,738	70,498
Chittagong Division	...	57,617	53,843
Patna Division	...	69,876	61,472
Bhāgalpur Division	...	50,680	43,445
Orissa Division	...	16,336	24,973
Total	...	3,60,798	3,66,853

The Telkupi khal in Pubna was kept in navigable condition during the year

Water communications.

by the removal of silt at a cost of Rs. 1,033. A sum of Rs. 289 was expended by the Mymensingh District Board in improving and deepening the Khutiakhali and Bhabadebkhali in the Netrakona subdivision. The side excavation of the road to Penny from Sudharam, in the district of Noakhali, has been widened and is now navigable by small boats during the rains. The re-excavation of the Gokarna, Jagidara, and Kaitalla khals was taken up and completed by the Tippera District Board. The first of these is an old Mogul work, and shortens by 28 miles the approach to Brahmanbaria by water. The Malda District Board expended the sum of Rs. 173 in removing snags from navigable channels. A sum of Rs. 499 was expended by the Marshidabad District Board in clearing and repairing two drainage cuts, aggregating 8½ miles in length. The Dinajpur District Board kept in good order the Dinajpur-Gouripur channel, at a cost of Rs. 511, and drainage obstructions at four different places were removed at a cost of Rs. 383.

The daily steamer service between Rampur Boalia and Damukdia and

Steam river service.

between Palua and Kushtia continued to be maintained by the District Boards of Rajshahi and Pabna through subsidies of Rs. 200 and Rs. 300 respectively. The District Board of Dacca continued to manage the steam ferry service between Narayanganj and Maushiganj till the 1st November 1891, when it was leased out to a farmer. In Backergunge the steam ferry services (a) between Barisal and Khulna, (b) Barisal and Patuakhali, and (c) Barisal and Noakhali, *via* Dakhin Shahbāzpur, continued throughout the year. Towards the end of the year a new steamer service was opened between Barisal and Chandpur, in the district of Tippera, with a branch to Madaripur in Faridpur: this new line of steam communication connects Barisal with the districts of Dacca, Tippera, and Faridpur. The usual monthly subsidy of Rs. 500 and Rs. 100 for the Barisal and Khulna and Barisal and Patuakhali lines, respectively, was paid. The total amount paid during the year for these two lines was Rs. 6,900-2-6. For the Barisal to Chandpur line a subsidy of Rs. 1,000 has been promised, and will be paid in March next. In Noakhali the Board continued to pay a subsidy of Rs. 200 a month to the Flotilla Company for the steamer service from Barisal to Taktakhali. In Tippera a steamer belonging to the India General Steam Navigation Company plied daily between Chandpur and Hajiganj on the Dakaita, the District Board granting a monthly subsidy of Rs. 250 to this line. A steamer service opened experimentally between Narayanganj and Daudkhandi was discontinued after a month's trial. The Malda District Board subsidised the steamer service between English Bazar and Rampur Boalia, the total amount paid during the year as subsidy being Rs. 2,020.

A sum of Rs. 1,000 was expended in Faridpur on improving communications in khas maháls, and in Backergunge Rs. 202 were spent in repairing the jetty at Patuakhali.

In the Burdwan Division the construction of the Haripal-Bhandarhati road was completed during the year, with the exception of a length of about one mile. Another project before the Burdwan District Board referred to the construction of a feeder road from the Debipur railway station to the village of Debipur, a distance of three miles. A zamindar of the village, Babu Kali Das Singha, offered to construct the road at his own cost, and the District Board have given him permission to begin the work. The road from Sripur station to Gosinga, in the Dacca Division, was continued up to Kapasia. Two other feeder roads, one from Mirzapur to Kapasia, and the other from Knudda to Simulia, were undertaken, of which the former has been completed. In Mymensingh the earthwork of two feeder roads from Balipara to Nandail and from Mymensingh to Parabari was completed during the year, and the feeder road to Iswarganj was metalled. In the Bhágalpur Division about 21 miles of feeder roads have been surveyed in the district of Purnea, from the Nagar station to Minpur on the main line of the Assam-Bihár State Railway, and from Soodam station on the Kishanganj branch to Minpur.

In the Burdwan Division permission was given by Government for the construction of a steam tramway between Tarkeswar and Magra. The land acquisition proceedings have commenced, and the construction of the line is said to have been taken in hand. An old scheme for the construction of a tramway from Burdwan to Katwa, a distance of 34 miles, was revived during the year, and the leading men of the district, interested in the scheme, were addressed by the Collector of Burdwan, in order to ascertain what money it would be possible to raise for the purpose. In the Presidency Division the question of constructing a light tramway from Baraset to Basirhat was under the consideration of the District Board of the 24-Parganas, and an establishment for the registration of traffic on the proposed line has been sanctioned since the close of the year. The District Board of Nadia proposed the construction of a steam tramway from Ranaghat to Krishnagar *via* Santipur, at an estimated cost of Rs. 14,50,000. The Board have given a guarantee of 4 per cent. on the capital: the scheme has received the Lieutenant-Governor's support, and the matter is now under the consideration of the Government of India. In the Patna Division, the Gaya District Board are collecting statistics of traffic with the object of ascertaining whether a tramway from Tikari to Gaya along the road from Gaya to Daudnagar would be likely to prove remunerative. The construction of a steam tramway on the Bakhtiarpur-Bihár road, at an estimated cost of Rs. 3,25,000, was under the consideration of the Patna District Board, and a formal application to construct the line has been made to Government since the close of the year.

The following table shows for each district the ratio per cent. which the cost of establishment bears to the total outlay on Civil Works during 1891-92 and in the year previous:—

Public Works Establishment.

District.	1890-91.			1891-92.		
	Total outlay on Civil Works (column 25 of Statement III).	Establishment and contingencies appropriate to Public Works (column 26 of Statement III).	Percentage of cost of establishment.	Total outlay on Civil Works (column 25 of Statement III).	Establishment and contingencies appropriate to Public Works (column 26 of Statement III).	Percentage of cost of establishment.
Burdwan	Rs. 1,86,168	Rs. 18,287	9.8	1,30,481	15,164	11.6
Bankura	47,433	8,768	18.5	43,928	9,230	21.0
Bichner	55,430	7,398	13.3	50,281	9,843	19.6
Midnapore	1,38,708	18,757	13.5	1,40,973	10,498	7.4
Hugly	1,38,340	10,373	7.5	1,18,518	10,454	8.8
Howrah	57,179	4,814	8.4	52,200	5,001	9.6
24-Parganas	1,97,484	21,879	11.1	1,97,640	20,054	10.1
Khulna	57,808	4,803	8.3	51,788	5,738	11.1
Nadia	68,735	11,407	16.6	40,187	11,071	27.5
Jessore	1,07,430	10,301	9.6	1,05,808	17,283	16.3
Morehshabad	60,097	12,223	20.3	51,378	11,345	22.1
Dinajpur	1,29,839	15,815	12.2	1,23,440	14,684	11.9

DISTRICT.	1890-91.			1891-92.		
	Total outlay on Civil Works (column 88 of Statement III).	Establishment and contingencies appertaining to Public Works (column 89 of Statement III).	Percentage of cost of establishment.	Total outlay on Civil Works (column 88 of Statement III).	Establishment and contingencies appertaining to Public Works (column 89 of Statement III).	Percentage of cost of establishment.
Rajshahi ...	Rs. 65,458	Rs. 13,073	19.7	Rs. 61,630	Rs. 12,831	21.1
Rangpur ...	1,40,916	17,380	12.4	1,41,005	17,243	14.3
Roga ...	39,001	7,100	21.0	34,500	3,720	14.0
Pabna ...	51,844	8,421	16.3	51,000	8,250	16.2
Jalpaiguri ...	1,14,338	10,171	8.9	1,16,000	11,510	9.9
Dacca ...	79,536	9,435	11.9	71,700	9,007	13.1
Faridpur ...	47,300	7,300	10.8	43,011	8,103	18.7
Buckergunge ...	1,11,703	13,420	11.1	1,01,000	12,816	12.6
Mymensingh ...	1,91,002	20,158	10.5	2,02,500	20,583	10.1
Tripura ...	1,44,067	14,320	8.5	1,21,538	12,747	10.4
Noakhali ...	71,821	10,110	14.0	82,312	11,300	13.7
Chittagong ...	88,100	13,523	17.0	2,21,400	16,100	7.1
Patna ...	1,81,005	23,001	12.7	1,80,544	21,000	12.7
Gaya ...	1,77,308	31,700	17.8	2,22,400	31,000	14.3
Shahabad ...	1,39,141	19,019	13.6	1,57,285	20,520	13.0
Muzaffarpur ...	1,27,917	21,000	21.7	1,58,550	20,540	14.8
Darbhanga ...	1,10,440	21,000	19.0	1,59,100	22,157	20.8
Saran ...	1,71,307	27,377	15.9	1,63,000	22,000	26.1
Cleanburn ...	66,384	15,703	19.1	58,100	15,400	10.7
Monghyr ...	1,34,000	19,721	11.9	1,57,100	20,600	16.3
Bhawalpur ...	1,22,500	21,077	17.2	1,25,200	23,000	18.6
Barran ...	1,14,000	17,800	15.6	1,10,000	18,100	16.1
Malda ...	20,000	6,000	30.0	21,000	7,000	22.8
Chittark ...	51,000	10,100	20.0	51,000	10,100	19.7
Bara ...	30,000	6,000	20.0	11,000	6,100	13.4
Bahadur ...	20,000	3,000	15.0	21,000	5,000	14.5
Total ...	39,57,101	5,65,400	14.3	40,57,000	5,61,400	13.9

The maximum limit of 20 per cent. prescribed in the second proviso of section 33 of the Act was exceeded in Saran, Nadia, Malda, Rajshahi, and Darbhanga. The excess has been satisfactorily explained in every case to be due to reduced expenditure, and not to undue increase of establishment. The ratio was highest in Saran (24.1) and lowest in Chittagong (7.1). The average of the Province was 13.9 per cent.; this was exceeded in twenty-three districts, and seventeen districts spent less than the average on establishment.

Marine.

THE PORT OF CALCUTTA.

LIEUTENANT E. W. PETLEY, R.N., held charge of the Port Office throughout the year.

The strength of the pilot service at the close of the year was 60 pilots of all grades and 13 leadsmen, showing a reduction of 3 leadsmen on the strength of the previous year.

This was due to promotions and to casualties caused by the loss of the pilot brig *Coleroon*. One leadsmen apprentice was appointed locally and two were brought out from England during the year.

The subjoined table exhibits the number of arrivals and departures of steamers and sailing vessels during the past two years:—

Shipping.

		Arrivals.	Departures.	Average tonnage.
Steamers ...	1890-91	811	816	2,569
	1891-92	897	887	2,630
Sailing ships	1890-91	233	236	1,635
	1891-92	220	200	1,489

The number of steamers has increased as well as their average tonnage, while in the case of sailing ships both the number and the tonnage have decreased.

The following statement shows the number of vessels drawing 21 feet and over which were piloted inwards and outwards during 1890-91 and 1891-92:—

YEAR.	Steamers or sailing ships.	21 to 22 feet.		22 to 23 feet.		23 to 24 feet.		24 to 25 feet.		25 to 26 feet.		26 to 27 feet.		Total.	
		Inward.	Outward.	Inward.	Outward.	Inward.	Outward.	Inward.	Outward.	Inward.	Outward.	Inward.	Outward.	Inward.	Outward.
1890-91	Steamers ...	30	38	38	100	41	119	18	50	...	12	...	1	128	317
	Sailing ships ...	40	67	45	40	7	12	3	1	...	...	...	...	104	139
	Total ...	80	105	83	140	48	131	21	51	...	12	...	1	232	456
1891-92	Steamers ...	40	94	50	111	26	185	19	36	...	24	1	3	151	479
	Sailing ships ...	30	40	20	35	12	20	1	3	...	...	...	...	78	108
	Total ...	70	134	70	146	38	205	20	39	...	24	1	3	229	587

This table shows how much lighter the ships are when they enter in the port than when they leave it; and also that the number of outward vessels drawing more than 23 feet has increased from 217 to 297.

There were 32 cases of grounding and 9 cases of collision during the year, against 47 and 12 during the previous year. None of the casualties resulted in the loss of a vessel, but in 3 cases considerable damage was done. Of the casualties by grounding, 23 were accidental or slight, and 3 due to alteration of channel, the remaining 6

Casualties in the river.

being due to the fault of the pilot. Of the collisions, 8 were accidental or slight, and 1 was due to the unskilfulness of the pilot. The percentage of casualties during the year was 1·86, against 2·81 during 1890-91 and 2·14 in 1889-90.

A very severe cyclone took place in the upper part of the Bay of Bengal on the 6th November 1891, and it is with great regret that the Lieutenant-Governor has to record that the pilot brig *Coleroon*, stationed at the mouth of the Hooghly, foundered with all hands on board, viz., 5 European officers, 37 native crew, and 5 private servants. The other pilot brig *Fame* escaped, but sustained heavy damages.

The collections under the head Pilotage receipts amounted to Rs. 9,01,447.

Finance.

The following table shows the receipts for the last three years:—

			Ra.
1889-90	...	...	8,18,922
1890-91	...	...	8,57,952
1891-92	...	...	9,01,447

The expenditure under this head has during the last three years exceeded the receipts by Rs. 1,64,040, and to this deficit payments in England must be added.

There has been no change in the Eastern and Gasper channels, which

State of the channels.

have remained steady, but the Lower Saugor Roads has deteriorated very slightly, though the actual

18 feet contour area has not increased. The Eden and other channels below Diamond Harbour have all remained fairly steady and open. The Nynan and anchoring creek tracks were abnormally low until the end of December, when they commenced to improve, and in March the channel had resumed its old form. Seven inward-bound and one outward-bound vessels were neaped for want of sufficient water over the bars.

The steamer *Guide* was twice docked to have her bottom cleaned and painted and certain repairs and alterations effected.

Government vessels.

This vessel made 27 trips during the year. The

pilot brigs *Sarsuti* and *Fame* were each docked twice. The latter vessel was fitted with a new jibboom in lieu of the one carried away by the India General Steam Navigation Company's flat *Karnafuli*.

The number of certificates of each class granted to masters, mates, and engineers after examination at Calcutta is shown in the table below:—

Examinations.

Nature of certificate.	CANDIDATES.	Total number examined.	RESULT.			Provisional certificates granted.	Renewal of certificates.	Remarks.
			Passed.	Failed.	Ineligible.			
Colonial ...	Master	19	17	2	...	...	...
	First Mate	32	29	3	...	...	...
	Only	1	1	...	...	...	...
	Second "	11	8	3	...	...	...
	First class Engineer	9	4	5	...	...	...
	Second "	15	9	6	1	...	...
Local ...	Master	...	...	...	...	...	...
	Mate	...	...	...	...	...	...
	Engine-driver under Act VII of 1884	5	2	3	...	...	...
	First class Master (Inland)	9	7	2	...	...	...
	Second " "	61	41	20	...	...	...
	Serang	14	7	7	...	...	...
	Engineers	2	1	1	...	...	...
	Engine-drivers	33	21	11	1	...	...
Total		211	147	63	2	...	...

Two vessels were registered under the Merchant Shipping Act, 1854, and the registry of one vessel was transferred.

Registration of vessels.

The following statement shows the number and description of vessels surveyed during the year under the several Acts relating to Merchant Shipping:—

Description of vessels.	Number of vessels.	Number of visits made.	Number of certificates granted.
Inland steam-vessels under Act VI of 1884.	114	355	110
Indian steam-ships under Act VII of 1884.	55	228	53
Indian steam-ships for examination in docks.	5	6	4
Native passenger vessels under Act X of 1887.	55	55	65
Emigrant vessels under Act XXI of 1883.	25	154	25
General survey ...	34	49	27
Total ...	288	847	274

HEALTH OF THE PORT OF CALCUTTA.

Inspections.

The subjoined table shows the number and description of the vessels inspected by the Health Officer of the Port during the past five years:—

YEAR.	INWARD-BOUND VESSELS INSPECTED.		OUTWARD-BOUND VESSELS INSPECTED.		Total number of inspections.
	Foreign-going.	Coasting.	Foreign-going.	Coasting.	
1887 ...	630	100	699	172	1,601
1888 ...	568	88	629	179	1,464
1889 ...	559	112	598	174	1,443
1890 ...	530	117	576	171	1,394
1891 ...	629	185	627	60	1,601

The total number of inspections shows an increase over that of the previous year. The increase is stated to be due to a greater number of foreign arrivals and more frequent inspection of inward-bound coasters.

There has been an improvement in the ventilation of the fore-castle of ships, but the Health Officer has stated that there is still much room for improvement in fore-castle comfort, especially as regards cargo steamers. In these the fore-castle is said to be merely an iron box with three or four small ports in the two sides and probably two ventilating tubes in the roof. In the hot weather it is scarcely possible to go into them when these vessels are in port. An awning is usually stretched over the deck, but in some instances even this is not supplied, and it is not sufficient to prevent the iron deck being heated to a temperature almost unbearable. The Health Officer has suggested that the fore-castle deck or roof of all iron-built vessels trading with the East should be sheathed with wood both above and below, and has submitted a report giving the names of these vessels and of their owners. The Government of India has been requested to bring these complaints to the notice of the Board of Trade in the hope that rules may be passed to secure a more humane system of construction in ships trading to India.

The absence of properly protected bathing accommodation for Native crews in vessels trading with European ports, referred to in last year's report, is less the subject of complaint, as owners, when their attention is

directed to the matter, fit up bathing-rooms for the use of the Native portion of the crew.

The number of European seamen who arrived in port during the year was 21,505, against 19,496 in the previous year: the daily average number in port was 1,426, against 1,679 in 1890. Including deaths out of hospitals, the death-rates per mille of the past five years were as follows:—

			Cholera.	Other causes.	Total.
1887	...	...	10·03	16·91	26·94
1888	...	...	10·59	27·15	37·74
1889	...	...	11·07	20·29	31·36
1890	...	...	8·33	15·49	23·82
1891	...	...	7·01	22·44	29·45

The number of admissions into hospitals and deaths from different diseases during the five years ending with 1891 are shown in the subjoined table:—

			1887.		1888.		1889.		1890.		1891.	
			Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Cholera	...	...	29	19	26	15	33	17	15	14	12	4
Diarrhoea	...	...	116	1	106	2	142	2	51	...	66	2
Dysentery	...	...	70	...	94	4	61	4	24	...	31	...
Fever, enteric	...	...	8	2	2	...	1	...	1	1	8	4
„ malarious	...	...	220	1	129	1	227	2	167	3	106	2
„ simple	...	...	65	...	82	1	79	...	86	...	88	...
Scurvy	...	...	4	...	3	...	...	...	2	...	5	...
Small-pox	...	...	1	...	1	...	...	...	...	...	...	...
Sunstroke	...	...	6	1	19	6	6	1	4	1	3	...
Other diseases	...	...	1,201	11	1,182	21	1,267	17	1,066	19	976	17
Total	...	...	1,719	35	1,675	49	1,816	43	1,419	38	1,284	34

The total number of natural deaths was 42, against 40 in the previous year. Of the 42 deaths, 34 occurred in hospital and 8 out of hospital. The number of cholera cases was less than in the year previous. There were altogether 13 cases, of which 10 proved fatal. The death-rate (7·01) per mille calculated on the daily average population was lower than that of the previous year, and was also lower than the quinquennial mean (10·0). No case of small-pox was admitted during the year. There were 5 cases of scurvy, against 3 in the year 1890, none of which were attended with fatal results. There were 6 cases of sunstroke, of which 3 proved fatal. The 3 cases that were admitted into hospital terminated favourably. The number of cases of drowning was 9, against 14 in the year previous.

The following figures exhibit the admissions into hospital since the year 1883 of European seamen suffering from venereal diseases:—

			Total admissions.	Rate per thousand
1883	...	...	237	127·4
1884	...	...	184	109·2
1885	...	...	170	100·4
1886	...	...	417	179·2
1887	...	...	228	120·4
1888	...	...	183	121·1
1889	...	...	186	114·3
1890	...	...	248	147·7
1891	...	...	185	129·7

The number of admissions was lower than that in the previous year. The Health Officer, however, reports that ships' officers inform him that since the repeal of the Contagious Diseases Act, there has been a great increase in the

number of men who have to be put off duty suffering from venereal affections after a vessel has left port.

Deaths at sea.

There were 28 deaths at sea during the year under review, against 32 in 1890.

The following figures show the mortality from all causes among the Native floating population, the averages being calculated on a population of 25,000 :—

Sickness and mortality among the Native floating population.

	Total deaths.		Ratio per mille.	
	1891.	1890.	1891.	1890.
Cholera	97	55	3.88	2.14
Bowel-complaints	7	3	.28	.11
Fever, malarious	11	8	.44	.31
Do., simple	22	20	.88	.78
Other causes	33	31	1.32	1.20
	<u>170</u>	<u>117</u>	<u>6.80</u>	<u>4.54</u>

Of the 170 deaths that were reported during the year under review, 35 occurred in hospital; out of the 97 deaths from cholera, 17 occurred in hospital.

Twenty-seven deaths are reported to have occurred among lascars at sea during 1891, against 28 in the year previous.

Lascar crews.

Of these 2 occurred in vessels making coasting voyages, and the remaining 25 in foreign-bound steamers and ships, against 2 and 26, respectively, in the previous year. The rates were .31 and 2.98 per mille, against .36 and 3.37 in the year before, and calculated on the total population, the death-rate was 1.89, against 2.12 per mille. No complaints were made by the lascar crews during the year.

The S.S. *Khiva*, from Jeddah to Calcutta, arrived in the port on the 21st August with 934 pilgrims. There were 19 cases

Pilgrims.

of small-pox on board, and the vessel anchored in mid-stream below Mateabrooj. These cases were sent to the Campbell Hospital, the unprotected pilgrims were vaccinated, the ship thoroughly disinfected, and allowed to take up her moorings at Baba Ghat on the 23rd.

The general improvement in the conservancy of the foreshore of the river, noticed in last year's report, continued during the year.

Conservancy.

The Commissioner of the Burdwan Division states that the owners of the brickfields at Ghosery have constructed latrines for the use of their employes, but that nuisances are still committed there by outsiders and boatmen who anchor there and repair boats. The Magistrate has directed the District Superintendent of Police to arrest persons committing nuisances there.

There has been an increase in the number of corpses and carcasses found floating in the river.

Corpses and carcasses.

No information has been received regarding the supply of filtered water to the shipping during the year. The Health Officer has been asked to furnish this information in future reports.

Water-supply.

The post of Shipping Master was filled by Captain E. W. Potley, R.N., throughout the year. Mr. L. Namey, Chief Clerk of the office, was on the 18th November 1891 appointed to be also a Deputy Shipping Master at this port.

CALCUTTA SHIPPING OFFICE.

The receipts of the Shipping Office, which for some years had been steadily rising, till it reached Rs. 36,908 in 1890-91, fell during this year to Rs. 31,093, showing a decrease

Financial results.

of Rs. 4,915. This decrease is said to be due to the recent Act VI of 1891, under which the Straits Settlements are included in the Indian Home trade; and as vessels on this trade do not engage or discharge their crews through the Shipping Office, several large steamers which formerly used the Shipping Office for shipping and discharging the crews now abstain from doing so. By this arrangement, the Shipping Office is converted, as far as these vessels are concerned, into a mere record and registry office, duplicates of originals and time-expired agreements being deposited in it, and regular lists furnished to

it of the seamen shipped and discharged on board during the course of the voyage. The disbursements amount to Rs. 20,318, against Rs. 19,887 during the previous year, and show little variation.

During the previous year this Government had under consideration the question of reducing the fees levied by the Calcutta Shipping Office so as to more nearly balance receipts and expenditure. On further examination of this question, it was found that there were difficulties in the way of making an equitable reduction, as although the Government had power under the Act to reduce the fees, the issue of such an order would not restrict the power of the owners to recover from the seamen according to the scale fixed in section 6 of the Act. The question was therefore allowed to drop, but steps will be taken to insert a provision in the amended Code of Merchant Shipping now under preparation, under which the amount to be recovered from the seamen will be reduced in proportion to the reduction of the fees levied.

There was an increase of Rs. 3,506 in the amount of funds held in trust by the Calcutta Shipping Office, the figures being Rs. 52,022 in 1891-92, against Rs. 48,516 in 1890-91.

The transactions of the trust fund show an increase of Rs. 3,506. This increase was chiefly due to increases under "Deposit money of Native seamen" and "Estates of British seamen," and there was also a slight decrease under "Deposit money of British seamen."

The numbers of seamen of all nationalities shipped and discharged through the Shipping Office during the year were 17,194 and 16,435 respectively, against 19,572 and 18,915, the corresponding numbers in the previous year.

This decrease, as compared with 1890-91, is due to the extension of the "Home trade" area. The number of Eurasians as distinct from Goanese was 68 shipped and 44 discharged. It is a remarkable fact that not a single Eurasian or Goanese is a lascar or fireman. A few Eurasians, however, are Officers and Engineers.

Simultaneously with the decrease in the number of British seamen discharged through the Calcutta Shipping Office, there has been a falling off in the remittances on account of seamen's money-orders. The amount remitted was Rs. 11,009, against Rs. 14,404 during 1890-91.

Whenever complaint was made steps were taken by the authorities to protect seamen from imposition. In one case it was stated that the master had overcharged a seaman for granting him his discharge. This having been found to be correct, the amount overcharged was ordered to be refunded. In another case a Muhammadan cabin boy was ordered to do certain work opposed to his caste prejudices, and on his refusal he was assaulted. The charge having been proved, the boy was awarded one month's pay as compensation. Several other complaints were made, but on enquiry they were found to be either false or exaggerated.

The total quantity of lime-juice examined and passed by the Inspector of Antiscorbutics at Calcutta during the year under report was 5,329½ gallons. The following statement shows the transactions of the year as compared with those of the preceding year:—

INSPECTION OF LIME-JUICE OR ANTI-SCORBUTICS.

YEAR.			Quantity of lime-juice examined and passed.	Quantity supplied to shipping.	Quantity remaining in hand at the close of the year.
			Gallons.	Gallons.	Gallons.
1890-91	...	...	5,738½	5,608½	230½
1891-92	...	...	5,329½	5,209½	120
Decrease	...	...	408½	299½	...

The decrease in the quantity taken by the shipping is attributed to the fact that a smaller number of emigrant vessels supplied themselves with lime-juice this year than in the year before.

Out of the total quantity of 5,329 $\frac{3}{4}$ gallons passed in the year under report, the greater portion, viz., 3,840 $\frac{3}{4}$ gallons, was as usual taken on board as stores for the use of emigrants. The remainder, amounting to 1,489 gallons, was disposed of as follows:—

	Gallons
Taken on board British vessels for use of the crews	1,347
Ditto Foreign ditto	22
Balance in hand	120
Total	1,489

As compared with the figures of the previous year, the quantity of lime-juice taken on board British vessels shows an increase of 122 $\frac{1}{2}$ gallons, and is said to be due to an increase in the number of steamers carrying lascars, the numerical strength of the crews of which is considerably in excess of that of vessels of the same tonnage manned by Europeans.

The statement below shows the destination of the emigrant vessels supplied with lime-juice in the years 1890-91 and 1891-92:—

YEAR.	West Indies, &c.	Mauritius and Natal.	Total.
	No. of vessels.	No. of vessels.	No. of vessels.
1890-91	21	8	29
1891-92	20	4	24

No complaints were made by lascars regarding the issue of lime-juice at sea, nor were any cases of scurvy brought to the notice of the Calcutta Shipping Office. Non-alcoholic lime-juice is generally approved of and freely taken by all native seamen.

CALCUTTA PORT TRUST.

During the year the Commissioners reduced the consolidated debt due to Government from Rs. 41,35,972 to Rs. 39,94,381, or by Rs. 1,41,59,1 and invested in their own debentures a sum of Rs. 1,29,500 for the repayment of the different debenture loans, aggregating 60 lakhs, raised by the Commissioners. The gross debt of the Commissioners on the 31st March 1892, including the consolidated debt due to Government, amounted to Rs. 1,17,59,381, as shown in the statement below. These figures do not include the advances made by Government for the construction of the Kidderpore Docks:—

	Rs.
Consolidated debt due to Government	39,94,381
Port debt not repayable	17,65,000
4 $\frac{1}{2}$ per cent. debenture loan of 1881	10,00,000
Ditto ditto of 1883	20,00,000
6 $\frac{1}{2}$ per cent. ditto of 1896	30,00,000
	1,17,59,381

Against the foregoing ordinary debt the Commissioners hold block to the value of Rs. 2,28,17,139 in addition to the valuable Strand bank lands extending from Chandpal Ghat to Ahacreetolla, for which they pay to Government the annual rent of Rs. 37,292. The statement below shows the cost of the

works constructed or acquired by the Commissioners, and the sources from which the expenditure has been met:—

<i>Cost of work constructed or acquired by the Commissioners.</i>		<i>Source from which expenditure has been met.</i>	
	Rs.		Rs.
Expenditure on jetties and appliances for sea-going vessels to end of March 1892	83,64,172	By loan from Government (repayable) ...	60,25,100
Expenditure on inland vessels wharves, landing-stages, tramway, &c., on the Calcutta side ...	62,02,098	Less amount repaid ...	20,30,719
Expenditure on inland vessels wharves, landing-stages, tramway, &c., on the Howrah side ...	16,33,634	By loan from Government (not payable) ...	39,94,381
Expenditure on Graving Dock and Workshop at Howrah ...	5,26,484	.. .. on 4½ per cent. debentures of 1881	17,66,000
Expenditure on moorings, anchor-vessels, Harbour Masters' boats, light-ships, survey vessels, &c. ...	38,74,062	.. .. on 4½ per cent. debentures of 1883	10,00,000
Expenditure on Reserve Funds—		.. .. on 5½ per cent. debentures of 1886	30,00,000
Jetties Reserve Fund ...	93,244	Contribution from Government towards purchase of land for new riverside road ...	74,584
" Insurance " ...	50,000	Contribution from Government towards purchase of land for landing-stage at Prinsep's Ghat ...	10,000
Port Reserve " ...	3,64,260	Contribution from Government towards purchase of land for Port Approaches block ...	7,19,208
" Depreciation " ...	1,99,995	From sale of surplus land ...	4,00,367
" Approaches " ...	2,00,000		
Debenture Loan Sinking Fund ...	9,08,000		
Dock Contingent Fund ...	4,00,000		
		From revenue derived from work since formation of Trust ...	73,13,886
		Add amount repaid to end of March 1892 from revenue	20,30,719
			98,44,004
Total	2,29,17,139	Total	2,29,17,139

The advances received by the Commissioners from the Government up to the close of the year on account of the dock works at Kidderpore amounted to Rs. 2,58,65,668, against which a sum of Rs. 2,50,97,370 has been expended up to the end of March 1892. The repairs to the dock walls that were rendered necessary in consequence of the bulging which occurred in October 1890 were carried out in conformity with the recommendations of the Committee appointed by the Government of India.

As soon as the tidal basin had been dredged sufficiently deep, arrangements were made to admit vessels into the graving docks. The following vessels were docked during the year for overhaul and repairs:—In the Commissioners' graving dock—S.S. *Lindala*, *Palitana*, *Pentakota*, *Purnea*, *Patiala*, *Maharaja*, and *Borghese*. In the Government graving dock—R.I.M.S. *Maya*, *Guide*, *Irrawaddy*, *Porpoise*, *Cline*, and a railway pontoon.

The income of the year under Revenue Account amounted to Rs. 27,62,612, against Rs. 27,82,831 in the previous year, to which must be added the opening balance of Rs. 3,41,343. The expenditure amounted to Rs. 27,34,056, including Sinking Fund (Rs. 2,36,646), contributions for Dock Contingent Fund and Port Approaches (Rs. 6,60,000). The year therefore closed with a net credit balance of Rs. 3,69,899. The decrease in the earnings was due to less receipts from mooring hire on account of shorter stays made by vessels in port, and under expenditure the decrease was due to the contribution to the Port Approaches Depreciation Fund being only Rs. 50,000, as compared with Rs. 1,00,000 set aside in the preceding year.

Under Capital Account the receipts amounted to Rs. 2,07,652, including the opening balance of Rs. 1,47,652. The expenditure on new works amounted to Rs. 1,16,162, and the year therefore closed with a balance of Rs. 91,490.

The income under Part I, "Jetties," amounted to Rs. 12,66,948, against Rs. 12,38,673 during the previous year, and the expenditure to Rs. 8,69,465, including sinking fund and interest charges. The receipts from imports showed a small falling off, having amounted to Rs. 8,46,155, against Rs. 8,70,424 in 1890-91. This decrease is owing to the general falling off in import goods. The export receipts were Rs. 22,409 in excess of the preceding year, being Rs. 1,12,642 in 1891-92 and Rs. 90,233 in 1890-91. Two hundred and twenty-six vessels, with an aggregate tonnage of 561,938, were berthed at the jetties, as compared with

215 vessels and a tonnage of 480,759 in 1890-91: the average number of days each vessel occupied the jetties was 9·8, against 10·1 in 1890-91.

The activity in the wheat trade which prevailed in the early part of the year led to a serious block at the Howrah terminus of the East Indian Railway, and a deputation waited on the Commissioners with the object of obtaining a reduction in the existing tramway haulage and jetty shipping charges on grain and seeds to enable consignments to be brought direct to the jetties *via* the Jubilee Bridge. The Railway Companies having consented to certain reductions, the Commissioners, as a temporary measure, reduced their combined tramway and jetty charges from Rs. 106·5 to Rs. 75 per 100 tons.

The income from the petroleum wharf amounted to Rs. 1,76,407, or an increase of Rs. 7,304 on that of 1890-91. Fifty-two vessels entered the port with 4,014,710 cases, against 42 vessels and 3,208,777 cases in 1890-91. The chief feature in the petroleum trade was the marked increase in the importation of Russian oil. Of the 52 vessels, 21 were steamers from Batoum that landed 1,740,335 cases. In the previous year there were four vessels with 258,232 cases from that port and none in 1889-90. If therefore the same rate of progress is maintained, it would seem that the import of Russian oil will soon equal that of the American article.

The question of placing restrictions on the transport of petroleum by water through the port was finally decided during the year, and a notification was issued ruling that petroleum transported to Calcutta or Howrah under a license shall be conveyed by land, and not by boat, between Garden House and Cossipore. This rule was brought into force on the 1st April 1892.

A project was submitted by Messrs. Graham and Company for the importation and transport of petroleum in bulk. To enable this to be done, it is necessary that the rules framed by Government under the Petroleum Act should be revised. The revised rules have since the close of the year been approved by the Government of India, and published. In the meantime Messrs. Graham and Company have made arrangements at Budge-Budge for the erection of four iron tanks capable of holding 1,500 tons of oil, into which they propose to pump the oil from the ship by a pipe laid along one of the landing stages.

The quantity of tea brought into Calcutta amounted to 129 million pounds, against 105 million pounds in the previous year. The quantity that passed through the warehouse was 48 and 35 million pounds, respectively. The gross revenue from this traffic amounted to Rs. 84,786, and a further sum of Rs. 26,212 was realized by renting out a portion of the warehouse. The working expenses amounted to Rs. 47,499.

The receipts and expenditure on account of the inland vessels wharves, including payments for interest and sinking funds, have been Rs. 5,00,215 and Rs. 4,16,087, against Rs. 4,94,021 and Rs. 3,67,387 during the previous year, leaving a surplus of Rs. 84,128. The increase in the expenditure, as compared with the previous year, was entirely due to extensive repairs, the whole of the foreshore and cross roads between the Hooghly Bridge and Chitpur having been remodelled, and the floor of the open cargo shed opposite the Mayo Hospital having been renewed with Indian patent stone.

The income of the Strand bank lands amounted to Rs. 1,74,227, being a decrease of Rs. 751 on the preceding year's income, due to the loss of rent for the Port Office and for a small piece of land which was vacant during the greater portion of the year. The expenditure, including the rent payable to Government, amounted to Rs. 81,923, or Rs. 790 in excess of that for the previous year.

The income of the Harbour Masters' Department showed a falling off, the actual receipts having amounted to Rs. 5,20,349, or Rs. 50,016 less than in 1890-91. The receipts from mooring hire and Harbour Masters' earnings were less by Rs. 36,496, due to the short stay made by vessels in port. The earnings of the steam-tug *Hetty* also showed a falling off of Rs. 2,774, owing to the vessel having been laid

up in dock for overhaul. The expenditure, including interest and sinking fund, amounted to Rs. 4,78,546, showing a reduction of Rs. 41 on the previous year. The net revenue at the end of the year stood at Rs. 41,803.

In all 18 vessels met with casualties while in charge of Assistant Harbour Masters. This is the largest number yet reported in any year, but in none of them was any serious damage done, except in the case of the *Lindula*, in which an explosion, causing serious loss of life, occurred through striking the wreck of the *Regius*.

The number of cargo boats and passenger boats surveyed and registered during the year was 5,890 and 1,738, against 5,866 and 1,475, respectively, during the previous year. Though there was an increase in numbers, there was a falling off in the gross income owing to the reduced receipts from fines for plying boats without licenses.

The receipts from the Port Trust Railway during the year amounted to Rs. 2,91,571, as compared with Rs. 2,93,996 during the previous year, showing a decrease of Rs. 2,425 due to a general decrease in the traffic, but chiefly in the "inward through" and "local" branches. The expenditure, including charges for interest and sinking fund, amounted to Rs. 2,15,797, leaving a balance of Rs. 75,774.

The terms and conditions for the working of rail-borne traffic to and from the docks have been settled, and agreements have been entered into between the East Indian Railway and the Eastern Bengal State Railway and the Commissioners for the performance by the latter of terminal services on traffic despatched from and to stations on those railways and connected lines to and from the Kidderpore docks. These terms are that the railway shall deliver over and receive the dock traffic at the dock junction, from or to which point it will be taken charge of by the Commissioners, and that the total of the railway charges on dock traffic from north of Hooghly shall be the same as to or from Howrah and Sealdah, and that an all-round payment of one pie per maund shall be made by the railways to the Commissioners on account of conveniences supplied at the dock junction and of terminal services saved to the Railway Companies at Howrah and Sealdah. These concessions to be on condition of the Commissioners taking over all responsibility for the traffic once it is placed in the changing station, distributing it to the docks and returning the wagons and marshalling them at the changing station, and also furnishing all staff within the dock premises necessary for checking and tallying the traffic.

The Government of India wished the dock line from Akra junction to the Government Dockyard to be utilised for troop trains, and desired to know the terms upon which the Commissioners would agree to running powers being granted to the Eastern Bengal State Railway for such trains over their line. The Commissioners, in expressing their readiness to place at the disposal of the State their appliances in time of necessity, pointed out that the curves on the line were at places too sharp to admit of heavy locomotives working over them with safety, and the shunting operations incidental to a large goods yard were of such a nature as to make it undesirable to incur the risk entailed by foreign lines running through. In view of these difficulties, the Military authorities had already been advised by the Eastern Bengal State Railway administration that it would be preferable to make over the traffic at the junction, leaving the haulage over the dock lines to be done by the Commissioners' engines. The charge at which the Commissioners have undertaken to perform this haulage has been fixed at Rs. 2 per vehicle for the double journey. Two troop trains have passed over the line without any hitch.

The receipts of the Port approaches amounted to Rs. 9,303. Including a sum of Rs. 50,000 on account of depreciation, the expenditure amounted to Rs. 4,65,239, which was met from the following sources:—

		Rs.
Contribution from Jetties	...	2,00,000
Ditto from Inland vessels wharves	...	1,00,000
Ditto from Strand bank lands	...	80,000
Ditto from Harbour Masters' Department	...	10,000
Ditto from Railway	...	70,000
Total	...	4,60,000

In connection with a proposal for the adoption of a Uniform International Buoyage System in accordance with the recommendations of the International Marine Conference held at Washington in 1891, the Commissioners were asked if there were any serious objections to adopting this system for the buoys at the Sandheads and for the Hooghly channels. The system of colouring recommended has been accepted by the Commissioners, but objections are raised to the change in the shape of the buoys. These objections have been reported to the Government of India for orders.

HOOGHLY BRIDGE.

The ordinary receipts and working expenses of the bridge during the year amounted to Rs. 1,67,195 and Rs. 1,67,732 respectively, shewing a deficit of Rs. 537.

Financial.

The decrease in the receipts, as compared with the previous year, was caused by the loss of interest on the sum of two lakhs lent to the Corporation of Calcutta, and to the short earnings of the steam-tug *Hetty*, which was laid up some time for repairs. The income, however, exceeded by Rs. 9,598 the estimate (Rs. 1,57,597) of the Committee appointed in 1888 to consider the revised scale of tolls and fees which should be levied after the bridge debt had been paid off.

The expenditure, exclusive of that on plant for electric lighting and payments made to Government on account of proportion of Sinking Fund on consolidated and debenture loans, amounted to Rs. 1,67,732, against Rs. 1,47,066 during the previous year. This increase was due to the extensive renewal of the wearing surface of the bridge and to the cost of the overhaul of the steam-tug *Hetty*. The expenditure exceeded the income of the year by Rs. 537.

In addition to the ordinary receipts, viz., Rs. 1,67,195, the following sums which may be classed as extraordinary were received:—

	Rs.
Interest on Government securities of Pontoon Renewal Fund	2,000
Amount recovered by sale of Reserve Fund Government securities for Rs. 1,00,000 ...	2,01,029
Total ...	<u>2,03,029</u>

while the corresponding expenditure under the same head was as follows:—

	Rs.
Amount advanced to Calcutta Municipality as temporary loan ...	2,00,000
Sinking Fund on loan ...	3,347
Total ...	<u>2,03,347</u>
Deficit ...	<u>318</u>

The machinery for the electric lights was estimated to cost Rs. 42,050, but owing to the fall in exchange the actual expenditure has amounted to Rs. 49,668. The installation was completed on the 1st September 1891, when the lights were exhibited for the first time.

No sea-going vessels collided with the bridge in passing through the opening, but there were 95 collisions of other vessels, against 115 and 149 in 1889-90 and 1890-91, respectively. Two lives were lost in boats wrecked by collision with the bridge.

The bridge was kept in thorough working order during the year. The second new pontoon imported from England will be put in place during the ensuing cold weather.

THE PORT OF CHITTAGONG.

The financial position of the Chittagong Port Fund on the 31st March 1892 is shown in the subjoined statement:—

	Rs.	A.	P.		Rs.	A.	P.
Opening balance on the 1st April 1891	1,14,831	12	0*	Expenditure during the year 1891-92	76,816	11	10
Permanent advance	100	0	0	Balance on the 31st March 1892	97,264	13	9*
Receipts during the year 1891-92	59,149	13	1				
Total	1,74,081	9	7	Total	1,74,081	9	7

* Includes Rs. 20,200 invested in Government securities.

As stated in the previous year's report, a steam tug is being built for the port of Chittagong at a cost of £11,500, and a loan of Rs. 2,00,000 to cover this expenditure has been granted by the Government. The Commissioners have been asked to consider whether they do not consider it advisable to pay off a portion of this loan out of the balance at their disposal, as there seems to be hardly any use in their holding Government securities of the value of Rs. 20,200 and drawing interest on them, while they owe a considerable sum to Government and have to pay interest thereon. With this exception, the port of Chittagong is free from debt.

The subjoined table shows the number and tonnage of the vessels which visited the port during the year as compared with the figures of the previous year:—

		1890-91.		1891-92.	
		Number.	Tonnage.	Number.	Tonnage
European vessels trading with foreign ports.	Entered	42	62,042	40	41,348
	Cleared	37	57,288	34	45,469
Native craft trading with foreign ports.	Entered	...	...	1	89
	Cleared	1	143	2	225
Vessels trading with Home ports	Entered	951	168,376	717	204,629
	Cleared	946	164,073	734	202,086

Of the 36 vessels which cleared for foreign ports during the year under review, 11 were bound for the United Kingdom, 6 for Mauritius, 1 for Zanzibar, 4 for the Maldives, 6 for New York, 1 for Boston, 1 for Hamburg, 5 for Trinidad, and 1 for Port Said. Those for the United Kingdom, New York, Boston, and Hamburg, numbering in all 19, carried jute, while the remaining 17 carried rice. The number of vessels that cleared during the previous year with jute was 27 and with rice 11.

The total value of the foreign trade during the year was Rs. 94,52,654, of which only Rs. 4,85,591 were under imports. There was a decrease, compared with the previous year, of Rs. 37,98,739.

In the coasting trade the exports increased, but the increase was more than counterbalanced by a decline under imports, the net result having been a decrease in the total coasting trade of Rs. 6,68,558.

The appliances of the port are reported to have been kept in good order during the year. The depth of water in Track No. III and Track No. IV increased by 4 feet, while that in Track No. I decreased by 6 inches and in Track No. II by 1 foot. The state of the river on the whole was satisfactory.

The health of the shipping was good compared with that of the previous years. Forty-one persons were admitted into the

Health of the shipping.

Municipal Hospital, against 73 in the year before.

Of this number, 24 were cured, 9 relieved, 4 discharged otherwise, and 4 died of cholera. There were altogether ten cases of cholera amongst the shipping, of which five proved fatal. There were no cases of scurvy or small-pox.

Hospital port dues at the rate of one anna a ton had been levied in the previous year (1890) on all vessels manned

Hospital port dues.

by European crews; and the Civil Surgeon was

allowed a fixed salary for attending on the shipping. This arrangement did not prove satisfactory, and the order authorising the levy of the dues was, at the request of the Commissioners, cancelled on the 8th June 1891. The Commissioners have now requested that hospital port dues may be re-imposed on vessels manned by European crews, to admit of their providing suitable accommodation and treatment for sick seamen on shore only, leaving masters to make their own arrangements for attendance on board ship. The Lieutenant-Governor has sanctioned the levy of port dues at the rate of one anna per ton from the 1st of December 1892.

Two vessels laden with jute caught fire in January last, and considerable amount of property was destroyed on each occasion.

Fire on vessels laden with jute.

With a view to prevent similar accidents in future,

the Port Commissioners have proposed a rule prohibiting smoking and the use of naked lights on the upper deck of any vessel when in the act of loading or discharging jute, mineral oil, or any other inflammable cargo. The rule is under the consideration of the Government.

A new fifth order occulting light visible in clear weather at a distance of ten miles is being exhibited at Norman's Point

Light-houses.

from the 1st of April 1892. It is expected that

the alterations to the Kutubdia light-house will be completed by the 1st of January 1893, and a first order dioptric light exhibited from that date. It will be visible in clear weather at a distance of 17 miles.

Pilotage.

The state of the Pilotage Fund is shown in the subjoined table:—

	Rs.	A.	P.		Rs.	A.	P.
Receipts during the year 1891-92	16,517	5	11	Balance at debit on the 31st March 1891	8,171	0	5½
Balance at debit on the 31st March 1892	1,526	6	7½	Disbursements during the year 1891-92	9,872	12	1
Total	18,043	12	6½	Total	18,043	12	6½

The receipts fell from Rs. 200 in 1890-91 to Rs. 99 in 1891-92. This

Shipping Office.

decrease is due to the smaller number of British seamen discharged at this port, few of whom joined

other vessels. The receipts of the Trust Fund, including a balance of Rs. 347 brought forward from the preceding year, amounted to Rs. 8,852, the whole of which was disbursed. The numbers of seamen shipped and discharged were 17 and 50, against 83 and 135 during the previous year.

During the year 103 vessels were visited in the Port of Chittagong by the Shipping Master with a view to enquire into the health of crews and to inspect provisions, drinking water, medicines and fore-castle accommodation, and also to enquire into accidents and casualties on board. Similar statistics are not given for the Calcutta Port, because there, by an arrangement made two years ago, the Health Officer pays the visit and the Shipping Master has ceased to do so. The Health Officer has been requested to supply information for the purposes of this report in future. There was a bad outbreak of cholera in the spring of 1892, and the medical arrangements at the port were found to be insufficient.

THE ORISSA PORTS.

The following table shows the shipping and income of the Orissa ports during the past two years:—

Name of Port.	Year.	ENTERED.		CLEARED.		Port dues.
		Vessels.	Tonnage.	Vessels.	Tonnage.	
						Rs.
False Point ... {	1890-91...	71	94,298	74	94,298	9,161
	1891-92...	78	96,389	78	96,389	9,527
Puri ... {	1890-91...	37	40,302	37	40,302	3,444
	1891-92...	33	47,012	33	47,012	2,796
Balasore ... {	1890-91...	301	78,350	314	79,411	2,252
	1891-92...	346	78,380	344	78,809	2,912

There was an increase of Rs. 346 in the receipts, as compared with the previous year, which is attributed to a larger number of vessels employed in the foreign trade having called at the port during the year. Under arrivals and departures there was an increase of 7 and 4 vessels, respectively, but as regards steamers visiting the port there was a decrease, due to the fact that the British Indian Steam Navigation Company's weekly steamers plying between Calcutta and Bombay did not call at the port so regularly as in the previous year.

There was a decrease of Rs. 648 in the port dues, due to the rate having been reduced from two annas to one anna per ton from the 15th February 1891 and to the exemption of the *Lavada* from payment of such dues when she ran aground. Under arrivals and departures there was a decrease of 4 vessels.

The receipts from port dues show an increase of Rs. 660. The result is attributed to the larger number of vessels which called at the port. The figures for arrivals and departures show an increase of 44 and 30 vessels respectively. The tonnage of the vessels, however, does not show a corresponding increase. This is due to coasting vessels of smaller tonnage having visited the port during the year for cargoes of rice for Madras.

WORKING OF THE NATIVE PASSENGER SHIPS ACT.

The short voyage trade includes the following lines:—

Calcutta to Balasore.	Calcutta to Coast Ports.	Puri to Coast Ports.
Ditto Chandbally.	Ditto Rangoon.	False Point to Coast Ports.
Ditto Puri.	Ditto the Andamans.	Chittagong to Akyab.
Ditto Chittagong.	False Point to Calcutta.	Ditto Rangoon.

The passenger traffic between Calcutta and Balasore was larger than in the previous year. The following figures exhibit the number of arrivals at, and departures from, Calcutta and the number of passengers carried:—

		Number of voyages.	Number of passengers.
Arrivals	...	58	1,688
Departures	...	58	871

The passenger traffic between Calcutta and Chandbally was conducted by 7 steamers, against 5 in the previous year, and shows an increase over that of the year 1890-91.

An abstract of the traffic is subjoined:—

		Number of voyages.	Number of passengers.
Arrivals at Calcutta	...	224	86,063
Departures from Calcutta	...	224	90,612

During the year there were only 5 vessels that left the port of False Point for Calcutta, against 3 in the year before. In none of the voyages were any passengers carried. During the year one vessel appears to have been specially chartered for the purpose of carrying pilgrims to the port of Puri. An abstract of the traffic is subjoined:—

		Number of voyages.	Number of passengers.
Arrivals	...	1	737
Departures	...	1	974

There was an increase in the passenger traffic between Calcutta and Chittagong during the year 1891-92, as compared with that in the year before. Seventy-nine vessels arrived at the port of Chittagong with 12,850 passengers, and 85 vessels sailed from this port for Calcutta with 8,667 passengers. The arrivals in the year previous at the port of Chittagong were 59 vessels with 7,790 passengers from Calcutta, and the departures were 57 vessels with 6,040 passengers.

One thousand and ninety passengers sailed from Calcutta in 77 vessels, as against 1,053 passengers in 68 vessels in the year before.

One hundred and thirty-four vessels sailed from Calcutta for Rangoon with 34,875 passengers. In the year previous 35,145 passengers embarked for that port at the port of Calcutta in 152 vessels.

The trade between Puri and the Coast Ports was very small, 16 passengers only having sailed from Puri in two vessels.

Like the Puri and Coast Ports trade, the trade between False Point and the Coast Ports was also very small, 12 passengers only having sailed from False Point.

There was a decrease in the passenger traffic from Chittagong to Akyab during the year as compared with that in the previous year. Thirteen thousand four hundred and fifty-seven passengers embarked at Chittagong from Akyab on board 52 vessels, as against 22,000 passengers in 72 vessels in the year 1890-91.

During the year 1891-92, 43 vessels left the port of Chittagong for Rangoon, in which 8,668 passengers were carried.

As in the year 1890-91, only two steamers were employed during the year under report in the trade with the Andamans.

One of these made seven voyages to Port Blair and carried 821 passengers, and the other two voyages and carried 106 passengers, making a total of nine voyages on which 927 passengers were carried, against six voyages on which 390 passengers were carried in the year preceding.

The following figures show the total number of passengers that sailed on long and short voyages during the years 1890-91 and 1891-92:—

YEAR.	Number of long voyages.	Number of passengers.	Number of short voyages.	Number of passengers.
1890-91	9	1,129	910	228,530
1891-92	4	45	1,097	261,497

From the above figures it will be observed that there was an increase in the number of passengers that were carried on short voyages during the year under report, while the number carried on long voyages shows a decrease; the decrease is due to no passengers having embarked at Calcutta for Jeddah during the year 1891-92.

One vessel arrived in port on the 21st August 1891 with 934 pilgrims from Jeddah, 19 of whom were suffering from small-pox. The working of the Native Passenger Ships Act X of 1887 during the year 1891-92 appears to have been satisfactory, and no complaints were preferred against it.

IV.—PRODUCTION AND DISTRIBUTION.

Meteorology.

THE changes in the administration of the Department during the year were of minor character. A number of small improvements were, however, introduced to make the previous arrangements work more smoothly.

Working of the Meteorological Department.

In all 70 observatories submitted reports to the Bengal Meteorological Office during the year. They are arranged as follows:—

Observatories.

- 1 first-class observatory at Alipore under the direct control of the Meteorological Reporter to the Government of India.
- 15 second-class observatories, of which 11 are in Bengal, 3 in Assam, and 1 in Burma.
- 38 third-class observatories, of which 31 are in Bengal, 6 in Madras, and 1 in Burma.
- 8 voluntary observatories, of which 6 are in Bengal, 1 in Assam, and 1 in Madras.
- 8 observatories (4 in Burma, 2 in Ceylon, and 2 in Madras) which, though not directly under the Bengal Reporter, sent daily observations in connection with the storm-signal service.

Besides these, 267 rainfall-recording stations sent in returns of rainfall during the year.

Inspection of observatories.

The following observatories under the Bengal Reporter were inspected during the year:—

Arrah.	Chaibassa.	Dehri.
Bankipore.	Chapra (twice).	Gaya.
Bankura.	Caddalore.	Kalimpong.
Berhampore.	Cuttack.	Malda.
Bhagalpur (twice).	Darbhanga (twice).	Muzaffarpur.
Buxar.	Darjeeling.	Ranchi.
	Raniganj (twice).	

The majority of these stations were found in good order. The observatories at Cuttack, Caddalore, Dohri, and Malda were not in a satisfactory condition, while Chaibassa, Ranchi, and Raniganj were in bad order.

An important step was taken during the year in the matter of securing more accurate rainfall statistics by the introduction of a system of rain-gauge inspection. Rules for the guidance of local officers inspecting rain-gauges were prepared and circulated.

In connection with the Bay of Bengal weather-signal service, urgent telegrams reporting the weather conditions in the various parts of the Bay are despatched daily to Coconada, Madras, Rangoon, Akyab, and Negapatam. During the year under report arrangements were also made to enable the weather conditions of the Bay to be telegraphed daily by means of flag signals to outward-bound ships passing Sanger Island. The system of forwarding meteorological information from the pilot brigs at the Sandheads to Calcutta by means of flag hoists shown by the pilots of inward-bound vessels as they pass Sanger Island light-house continued to work successfully.

Storm-signal service.

The storm-signals were hoisted seven times during the year, viz., on the 28th May, 25th July, 1st and 23rd August, 22nd September, and 6th and 24th November. It is said that the first of the two cyclones of unusual severity that occurred in November was almost unique in character.

The various reports of the Department were regularly issued throughout the year. No special reports were published.

The meteorological conditions of the year in Bengal are usually considered under four periods, viz., (1) the cold weather season or the months of January and February; (2) the hot weather period consisting roughly of the months of March, April, and May; (3) the south-west monsoon season, usually lasting from the early part of June till nearly the end of October; and (4) the two north-east monsoon or cold weather months of November and December which close the year.

The weather conditions in January in Bengal were of fairly normal character, and for the greater part of the month typical north-east monsoon weather obtained. The number of barometric depressions originating in or advancing across Northern India was considerable, and these gave an exceedingly heavy snowfall in the Himalayas. Of these depressions, however, only two in any way affected the weather in Bengal, and one only was of any importance. One small depression advanced over Bengal from the 8th to the 10th, but it gave no rain, though weather conditions were distinctly disturbed by it, and a wave of high temperature passed over the Province in front of it. The second depression passed through Bihâr and Bengal on the 23rd and 24th, and gave fairly general, and in some cases heavy, rain in all districts except East Bengal and Orissa. With the exception of these two periods, weather was generally fine with almost cloudless skies. For the whole month the mean pressure was practically normal at the majority of stations, and the variations were not usually more than a hundredth of an inch, while temperature was higher than usual by about a degree. Cloud proportion was in distinct defect at almost all stations; but, on the other hand, humidity was higher than usual. The rainfall in Bihâr and in Chota Nagpur equalled rather more than an inch, and was very distinctly in excess of the normal. The falls in South-West and North Bengal averaged from about a quarter to a third of an inch, and were rather less than the normal falls; but Orissa and East Bengal were almost rainless throughout the month.

The meteorology of February over India generally was marked by several important features. Several storms and depressions appeared which gave very heavy rainfall to parts of Upper India, while excessive amounts of snow fell in the Western Himalayan and Afghan mountain regions. These disturbed conditions rather largely affected Bengal, and though on the first day or two of February weather was fine and conditions were fairly normal, conditions soon became decidedly disturbed. A deep depression made its appearance over North-Western India on the 1st of February, and on the 2nd of the month an exceptionally deep storm covered the north-west of the Panjab. The greater part of this storm broke up against the Himalayas, giving a heavy fall of snow. In connection with this storm also, a depression advanced over Bengal, giving a great increase of temperature in front of it, and a few showers also fell in Bihâr at the same time. In the rear of this depression a wave of exceptionally cold air advanced over Bengal, produced probably by the heavy fall of snow in the Himalayas, and in the three days from the 4th to the 7th a fall of temperature, varying from about 10° to 20° , took place over the Province, and temperature became about 10° below the normal. Conditions then became more normal until about the 20th, when another deep depression appeared over the Panjab, which was accompanied by very steep baric gradients and a strong cyclonic circulation of winds. The depression advanced in a south-easterly direction towards Sima, and on the 22nd it, to a great extent, filled up and disappeared, but it left a large low-pressure area which stretched over Bengal, and general rain set in over the greater part of the Province from about the 21st to the 25th. During this period the falls equalled about three times the normal for the whole month in East and North Bengal, they were about twice as large as the normal fall in South-West Bengal and North Bihâr,

while the falls were also considerably in excess of the normal in Orissa and South Bihâr, and about normal in Chota Nagpur. The actual average falls in February ranged from more than three inches in East Bengal to about two-thirds of an inch in South Bihâr and Chota Nagpur. Pressure during the month was everywhere above the normal, the excess ranging from about two to four-hundredths of an inch, while temperature was slightly below the normal in all districts except North Bengal, where there was a slight excess. The air was also more humid than usual in all districts except South-West Bengal and Orissa, where it was drier, and over the whole Province the cloud proportion was about equal to the normal.

The weather in March was very disturbed over Upper India and in the mountain districts to the north and north-west, and heavy snow again fell on the higher elevations, and the accumulation of snow in the Himalayan and Afghan mountains at this time became excessive. This unusually large accumulation of snow over the whole of the mountain area to the north and north-west of India had a large cooling effect on the atmosphere, and gave unusually low temperatures over the whole of Upper India, and in addition a larger and steadier drift of cool dry air forced itself from the mountain districts down the plains of Northern India. In March also warm moist winds began to flow over parts of India and over Bengal from the sea areas to the south, and hence with opposing wind systems of such widely different character, conditions became very disturbed, and thus the meteorological conditions which obtained in March were of a most unusual character. Almost throughout the month, instead of the fine settled weather with steadily increasing temperature, an almost complete absence of rainfall and cloud, and the low humidity which usually prevail, weather was in a more or less disturbed condition, rain was general, and at many stations very heavy on many days in the month; skies were heavily clouded, temperature was abnormally low, and the air was very damp. This reversal of the ordinary weather conditions was in most cases connected with feeble barometric depressions. On the 4th a shallow barometric depression formed over the central parts of India and the Peninsula, which at once caused disturbed weather and rain in Bengal. This depression drifted slowly in an easterly direction over the Province and affected the weather up till about the 10th. On the 11th a very decided barometric depression formed in North-Western India, which afterwards drifted away in an easterly direction along the line of the Himalayas, and this again caused weather to be rather stormy in Bengal. From about the 15th to the 18th conditions became more settled, when once again disturbances set in, the disturbance apparently commencing in the hills and in the higher strata of the atmosphere. On the 23rd a distinct area of low pressure had formed, which stretched from the south of Bihâr through Chota Nagpur and South-West Bengal into Orissa, and this afterwards travelled in an easterly and south-easterly direction to the north-east angle of the Bay, and then into Burma, which it reached on the 25th. During the whole of this period very disturbed weather, with many local storms, obtained, and rainfall was frequent up to the 26th, but for the remainder of the month fine, settled weather with almost cloudless skies and complete absence of rain set in. The rainfall in March was therefore generally excessive. It was about six times the normal amount in Bihâr, about five times the normal in Chota Nagpur, four times in Orissa, three times as large as usual in South-West and North Bengal, while in East Bengal it was almost normal in amount. Generally, the falls averaged from about two and-a-half to four and-a-half inches. Notwithstanding the disturbed conditions, the mean pressure in Bengal was in excess of the normal, the usual excess averaging about three or four-hundredths of an inch. The mean temperature for the whole month was about 4° in defect, but during the second week the day temperature at many stations was 10° and 12° lower than usual. Owing to the abnormal disturbances and rainfall, both humidity and cloud proportion were also largely in excess of the normal.

In April, for about the first twenty days, fine weather, of the usual hot season type, obtained, and with the rapid rise of temperature which then took place, the unusually low temperature which had existed in March was rapidly replaced by a moderate excess above the normal. From the 20th of April

however, a shallow low-pressure area was formed in the west and centre of the Province, accompanied by the usual cyclonic circulation of winds, and a period of disturbed weather with numerous local storms and rain set in, which lasted till almost the close of the month. The rainfall in East Bengal in April was about a third larger than the normal, and this division received 5.18 inches. In all other divisions the falls were in defect of the normal. In North Bengal the fall was a little less than two inches, or about two-thirds the normal. South-West Bengal received an inch, or only half the usual fall. In Orissa the fall was only half an inch, or about two-fifths of the normal, while in Bihár and Chota Nagpur the falls only averaged between one and two-tenths of an inch, and generally were only equal to a fourth of the normal fall. Pressure in April was above the normal, the excess equalling about one to three-hundredths of an inch. The mean temperature of the whole Province for the month was nearly normal, though in Orissa, East and North Bengal, and South Bihár slight excess temperatures were registered; while, on the other hand, slight defects were reported in South-West Bengal, North Bihár, and Chota Nagpur. Humidity was, if anything, a little lower than usual, while cloud proportion was generally higher.

Weather again generally in India during May was more disturbed than usual. Frequent showers of snow occurred during the month in the Western Himalayas, and added to the very large accumulation of snow which had fallen in the earlier part of the year, which accumulation had apparently a very marked effect in postponing the date of commencement of the rainy season in India generally, and of perhaps making the monsoon current unusually feeble. In Bengal in May, weather conditions almost throughout the month were also unusually disturbed, and local storms with rain were numerous, particularly in the second and third weeks, and in the southern, eastern, and northern districts. During the last ten days also conditions continued disturbed with more frequent rainfall, and there were many local storms up to the close of the month over almost the whole Province, the rainfall being due, first, to the action of a small but very feeble storm in the Bay, which formed off the Coromandel Coast on the 19th and 20th and advanced in a northerly direction, filling up as it advanced towards the Orissa Coast on the 24th; and, second, to a small whirl or secondary feeble depression formed in the same advance of monsoon winds which had given the previous feeble storm, which advanced from the Bay between Saugor Island and Chittagong on the 29th, and gave moderate rain to the southern and eastern districts. The rainfall during May was rather lighter than usual during the first week. It then became heavier, and was in excess of the normal in all districts except South Bihár, Orissa, and Chota Nagpur for the second and third weeks, but during the last part of the month it became exceedingly heavy and was in large excess in all districts. Thus the falls in East Bengal averaged fourteen inches, or nearly five inches more than usual. North Bengal received nearly twelve inches, or three and-a-third inches in excess; South-West Bengal more than nine inches, or nearly four inches more than usual. North Bihár registered five and-a-half inches, or two and-a-third inches in excess, and Orissa also rather more than five inches, or an inch and-a-third in excess. South Bihár and Chota Nagpur received about four inches, or roughly an inch and-a-half more than usual.

The variations of pressure from the normal in May were a little irregular, but for the whole month there was a slight excess, generally equalling about one or two-hundredths of an inch. Temperature was at first in considerable excess of the normal, but at the close of the month it was equally in defect owing to the heaviness of the rainfall, and the average for the whole month showed a defect of half a degree. Humidity and cloud proportion were both rather largely in excess of the normal during May.

During the first five months of the year, or in what may be termed the pre-monsoon months, the meteorological conditions over India generally were most abnormal. The most prominent abnormal characteristic was the excessive precipitation of snow in the Himalayas, which was extremely marked in the cold weather months and which continued even up to May, and it is probably safe to assert that in no year for the past quarter of a century has there been a snowfall at all approaching the amount which fell in this year. As has been suggested, this excessive deposit of snow in the Himalayas may probably account

for the many other abnormal features also found in the meteorology of India, and it certainly accounted for the very disturbed weather which existed in Bengal for the greater part of the first five months of the year. It is true that in January conditions were fairly normal; but even in this month the rainfall in Bihâr and Chota Nagpur was about twice as heavy as usual, while defective falls were received elsewhere. In February conditions were very disturbed owing to the unusual nature and intensity of the cold-weather storms, and the Province generally received a rainfall about twice or three times its normal amount. In March the conditions were exceptionally disturbed and stormy, and rainfalls were usually from about twice up to seven times the usual amount. April, on the other hand, was a fairly quiet and normal month, though rainfalls were generally rather largely in defect; but in May disturbed conditions again commenced and continued almost throughout the month, with the result that rainfalls were generally from 50 to 75 per cent. in excess. For the whole period of five months, it may be said that the rainfall in Bengal was about 92 per cent. in excess of the normal. All the meteorological divisions, indeed, showed a large excess for this period, the smallest being 38 per cent. of excess in East Bengal, and the largest 168 per cent. in excess in South Bihâr, and 137 per cent. in excess in North Bihâr; while all the other divisions showed excess amounts of from 50 to 90 per cent.

The monthly mean pressures, recorded throughout the five months, were in distinct excess of the normal, the excess usually being about 0·02" or 0·03". Temperature, on the other hand, was in very slight excess in January, about normal or in slight defect in February, April, and May, and in very large defect in March. Humidity and cloud proportion were above the usual amounts almost throughout this period.

In the Bay there were no signs of any advancing monsoon current up to the 18th or 20th of May, when rather strong winds set in representing probably the first advance of the monsoon. A small storm, which was of moderate intensity at sea, formed in front of this advance, and it afterwards travelled in a north-north-westerly direction, filling up on approaching the coast near Gopalpur on the 24th, and giving a wave of moisture-laden winds and rain to Bengal generally. Another small depression formed in this advance of monsoon winds in the northern half of the Bay, and advanced across the Sunderbans during the 29th of May, again giving a slight advance of monsoon winds to South Bengal; but though a burst of monsoon winds and rain was thus given to Bengal in May, yet the monsoon current did not establish itself permanently over the Province at this time, and it again retreated into the centre or south of the Bay.

The meteorology of June was most unusual. In ordinary years, after the preliminary advance of the monsoon winds, which takes place in the south of the Bay in the second half of May, similar advances usually take place early in June, and these, spreading over Bengal, give the ordinary monsoon rains, which commence on an average date of the 12th to the 15th, and continue steadily up till the middle of October. In the present year, owing apparently to the unusual weakness of the general monsoon current, which made the subsequent advances extremely feeble, and to the fact that there was a considerable deficiency of pressure in North-Eastern India and Burma and a large excess in North-Western and Western India, which distribution had been a prominent feature of the meteorology of India for the previous three months, the monsoon winds at first were not able to advance over Bengal, but they passed to some extent along the east of the Bay and over Burma and Assam, and partly over the extreme eastern districts of Bengal, where they gave moderate to heavy rain for the greater part of the month. It was not indeed till quite the end of the month that the monsoon current began to spread generally over Bengal and up the Gangetic plain, and hence the general monsoon rainfall did not begin in Bengal until the 27th, or a fortnight later than usual. Also, even when the current did set in over the Province, its strength appeared to be much below the normal, and consequently the wind velocities at the coast stations round the head of the Bay during June were much lower than usual. The rainfall in this month was therefore comparatively small, even though there had been an advance of monsoon winds at the

Monsoon period, June to October.

end of May, which had given good rain over a large part of the Province during the first three days of June. In East Bengal there was a fall of nearly thirteen inches, or five inches less than usual; North Bengal received nine inches, or more than eight inches in defect; Orissa only registered two and-a-half inches, or more than six inches less than usual; South-West Bengal received six inches, or four inches less than the average; South Bihâr averaged five and-a-half inches of rain, or rather more than an inch in defect; Chota Nagpur received rather less than four inches, and was nearly four and-a-quarter inches in defect; while, on the other hand, North Bihâr received more than eight inches of rain, or practically a normal fall. In some of the smaller districts the falls indeed were only from 10 to 20 per cent. of the normal, and such was the case in Puri and Cuttack.

In June the variations of pressure from the normal were considerable in different districts and at neighbouring stations, and also at different periods of the month; but the variations to a great extent neutralized one another, and consequently the mean pressure for the month differed only slightly from the normal pressure, usually being in defect by one or two-hundredths of an inch. Temperature was on the average about one degree in excess of the normal, but the excess was largest in Orissa, South-West Bengal, and South Bihâr. In cloud proportion and humidity the variations were unimportant.

In July the monsoon current blowing over Bengal, as judged by the wind velocities at the coast stations, appeared to be stronger than usual, though undoubtedly it was deflected more to the eastward than is generally the case, and the rainfall was only in excess of the normal in North Bengal, while elsewhere it was rather defective. The current was fairly steady in character, and the number of barometric depressions or feeble cyclonic storms forming in the Bay was smaller than usual. Only one small cyclonic storm formed at the head of the Bay on the 24th and passed inland, and there was also one cyclonic storm which generated in the east of the Bay, but which did not reach the land until August. For the first twenty days of July, conditions were of ordinary rather light monsoon character in Bengal and over the Bay, but on the 22nd a distinct low-pressure area formed in the north-west angle of the Bay, which continued almost unchanged in position and intensity up to the 24th, when it intensified rather rapidly, and on the morning of the 25th a very definite and rather influential barometric depression existed, the centre of which was over the Sunderbans to the east of Sagar Island. It then advanced in a north-westerly direction, and on the 26th the centre of the storm was in Chota Nagpur; on the 27th it was near Jubbulpore and Sutna; on the 28th near Jhansi; on the 29th to the west of Ajmir; and on the 30th it was near Bikanir, and was rapidly filling up. The storm was accompanied by a strong cyclonic circulation of winds, but the force of the winds was mainly confined to the southern and eastern quadrants at some distance from the centre, and the winds near the actual centre were comparatively light. In its rear a heavy wave of moisture-laden winds spread over Bengal and over Northern India generally, and from the 26th to the 30th of July very heavy rain fell. In July, therefore, the rainfall in North Bengal equalled about sixteen and-a-half inches, or nearly two and-a-half inches more than usual; in East Bengal also about sixteen and-a-half inches fell, or practically a normal fall; in Chota Nagpur the fall averaged nearly thirteen inches, or slightly less than the normal; and in South-West Bengal rather more than eleven inches fell, or again slightly less than the normal. Bihâr received between ten and ten and-a-half inches, or about two inches less than the normal; while in Orissa a little more than nine inches fell, or about three and-a-quarter inches less than usual. In the following districts the falls were very scanty and did not equal half the normal amounts:—Puri and Shahabad; while in the following the falls were less than two-thirds the usual fall:—Howrah, North Bhágalspur, and Saran.

In July pressure was, on the whole, in decided defect of the normal for a considerable portion of the month, while temperature was almost normal in all divisions except South Bihâr, where a distinct excess was registered. The average humidity was practically normal, while the cloud proportion was, if anything, larger than usual.

In August the monsoon current, as judged by the wind velocities at the northern stations in the Bay and at the inland stations in Bengal, was in distinct

defect of the normal almost throughout the month, but, on the other hand, over the Bay itself the current appears to have been slightly stronger than in normal years, though it was being deflected to an unusual extent towards Burma. On the other hand, as no less than four feeble barometric depressions and one cyclonic storm affected the weather, and as all of these either passed through or affected the south-western districts of the Province, these hence received rather abundant rainfall, while the remainder of the Province, and particularly the northern divisions, received falls decidedly below the normal. The cyclonic storm was formed in the Bay on the 31st of July to the north-west of Diamond Island, and commenced to move in a north-westerly or west-north-westerly direction. On the 1st of August it was to the west of Akyab, and was giving very heavy weather in the Bay. On the morning of the 2nd the storm centre was nearly over the Sunderbans, between Chittagong and Saugor Island, when it suddenly changed the direction of its advance and travelled almost due west along the face of the Sunderbans, passing between False Point and Saugor Island, and on the 3rd the centre was to the west of Balasore. It then advanced through Chota Nagpur to Satna, where it filled up on the 6th. On the 7th a small depression which had formed near the north-west angle of the Bay passed inland to the west of Saugor Island, advancing in a north-westerly direction. This passed into the North-West Provinces and the Panjab, and on the 10th it was near Delhi. On the 12th a depression was formed with a centre near Jessore, which afterwards moved in a westerly and north-westerly direction and filled up near Allahabad. This small storm gave very heavy weather near the head of the Bay. Again, on the 20th another depression formed in the north-west angle of the Bay and passed inland near Balasore on the 24th, and on the 31st a fifth depression was formed off the South Orissa Coast which gave moderate rain to Orissa.

The rainfall in August was heaviest in Orissa, where nearly sixteen inches fell, or four and-a-half inches more than the normal. Chota Nagpur received twelve and-a-half inches, or nearly an inch in defect of the normal. In South-West Bengal the falls averaged nearly eleven inches, or about two inches less than usual. In East Bengal ten and-a-half inches fell, or no less than five and-a-half inches in defect. South Bihâr received nine and-a-half inches, or about two inches less than the normal fall. The falls, however, were still more decidedly in defect in North Bengal and North Bihâr. North Bengal received only a little more than six inches, or rather more than seven and-a-half inches less than usual; while in North Bihâr the actual falls averaged seven and-a-half inches, or four inches in defect. The following districts received falls during August of less than half the usual amount:—Murshidabad, Noakhali, Pabna, Malda, Dinajpur, Rangpur, Kuch Bihar, Jalpaiguri, and Purnea; while falls of from half to two-thirds the normal were recorded in Nadia, Khulna, Jessore, Chittagong, Faridpur, Tippera, Bogra, and North Bhágampur.

The mean pressure for August was again not far removed from the normal. Compared with the general pressure for the Province, there was slightly deficient pressure in the north-west angle of the Bay and the adjacent parts of South-West Bengal, which apparently determined the position of formation of the greater number of barometric depressions during the month. Temperature was below the normal by moderate amounts in Orissa, and slightly below it in Chota Nagpur, but in all other divisions excess temperature was registered, the usual excess equalling from half to one degree. Humidity was almost normal during the month, but cloud proportion was, if anything, slightly in excess of the normal.

In September the monsoon current, as usual, decreased in strength, and though winds in the Bay were rather stronger than usual, and the winds in Bengal were quite as strong and perhaps steadier than usual, yet the amount of rain brought up by the current was small, though the slight rainfall was fairly general in all districts up to the 28th or 29th. The number of shallow barometric depressions which formed in the north-west angle of the Bay during the early part of the month was rather considerable; indeed, in the first eighteen days, four depressions generated and passed westwards and north-westwards through Orissa and South-West Bengal, though they were all so feeble that they scarcely require separate descriptions; but later on a more pronounced depression advanced from Burma across the Bay, and also passed through Orissa on the

22nd September. Most of these moved in a west-north-westerly direction along a trough of low pressure, which extended from the head of the Bay over part of the Central and North-West Provinces. The influence of the depressions was, however, rather limited, and the rainfall caused by them, though generally heavy near the track of the centre, was almost entirely confined to the western and south-western districts of the Province. The indraught also towards these storms seems to have withdrawn the rain-bearing current from the remainder of the Province, and hence to have concentrated the rainfall towards the western districts. Thus rainfall was in excess of the normal in Orissa and Chota Nagpur, while it was in decided defect elsewhere, and particularly in the northern districts, such as North Bihár and North Bengal, where the falls only equalled about a third of the normal quantities.

The rainfall in September in Orissa was the very large amount of eighteen and-a-half inches, or more than eight inches in excess of the normal amount, while the next largest fall was in Chota Nagpur, which only received nine inches, or a little more than the usual fall in this month. The falls in South-West and East Bengal equalled about six inches, while in South Bihár and North Bengal they were less than five inches, and in North Bihár the falls only averaged the small amount of three and-a-half inches. The defects in these districts in September were no less than the following amounts:—North Bengal eight and-a-half inches, North Bihár six and-a-half inches, East Bengal six inches, South Bihár three and-a-half inches, and South-West Bengal two and-a-half inches. In this month the following districts received falls of about a quarter of the usual amount:—Rajshahi, Rangpur, North Bhágampur, Darbhanga, and Muzaffarpur; while falls of only about half to a quarter of the usual amount were registered in Burdwan, Birbhum, Nadia, Chittagong, Noakhali, Tippera, Mymensingh, Pabna, Bogra, Malda, Dinajpur, Kuch Bihár, Jalpaiguri, Darjeeling, Purnea, Champaran, Saran, Gaya, and Monghyr. On the other hand, in the district of Cuttack the fall equalled no less than 129 per cent. in excess of the normal, and about 50 per cent. in excess in Puri and Balasore.

The only storm worthy of record during September was one which passed into the Indian region as a definitely formed storm from Siam. On the 20th it had advanced in a westerly direction from Siam, and its centre was in the Gulf of Martaban to the south of Rangoon. It then advanced in a west-north-westerly direction with such great rapidity that by the evening of the 22nd it had crossed the whole of the Bay of Bengal and was passing into Orissa, close to False Point. The small storm was, however, of no particular intensity; the lowest pressure reported at False Point being 29.436 inches, and it gave only squally weather in the Bay and at the coast stations during its passage. It afterwards passed into the Central Provinces, where its movement became northerly; later on it moved in a north-easterly direction till it reached the eastern part of the North-Western Provinces and Bihár, where it practically filled up.

Pressure in September was very irregular owing to the number of depressions formed, but the means for the whole month were very nearly normal in South-West Bengal, below it by 0.02 inch in Orissa, Chota Nagpur, and the west of Bihár, and above it elsewhere by variable amounts ranging up to 0.03 inch. Owing to the distribution of the rainfall, temperature was considerably below the normal in Orissa, and slightly below it in Chota Nagpur; but elsewhere it was above it, the excess being larger than one degree in North and South Bihár and North Bengal. The variations of humidity and cloud proportion during September were not important.

In October the weakness of the south-west monsoon current again made itself felt by the unusually early period at which it withdrew from Bengal, and by the early cessation of the monsoon rains, for the rainfall due to this current practically entirely ceased on 5th October instead of in the middle of the month as happens in normal years. There was also a decided absence of cyclonic storms or of barometric depressions such as are usually formed in this month, and, beyond a depression of very moderate dimensions, which formed in the south-west of the Bay towards the close of October, and which passed across the south of the Peninsula, there was no storm or even disturbed weather of any kind. Fine settled weather therefore prevailed in Bengal almost uninterruptedly

from about the first week in the month, and winds were more northerly in direction, and the northerly winds were also stronger than usual in the last three weeks of October, while temperature, humidity and cloud proportion, owing to the setting in of northerly winds, were all considerably below the normal during the month. Pressure, on the other hand, was unusually high almost throughout the month, and was considerably in excess of the normal for the period.

Rainfall was, however, extremely scanty, the average falls in the large meteorological divisions ranging only from 2·02 inches in North Bengal to 0·53 inch in Chota Nagpur, while the amounts in defect varied from nearly five inches in Orissa to about two inches in Bihár. Expressed as a percentage of the normal fall for October, the actual rainfall of the whole Province only equalled about 31 per cent., while in such divisions as Chota Nagpur, South-West Bengal, and Orissa the falls only equalled about 20 per cent., and no single division received as much as 50 per cent. of the normal fall. In the following divisions, indeed, the falls received were less than 10 per cent. of the usual amount for October:—Midnapore, 24-Parganas, Howrah, Hooghly, Burdwan, Khulna, Hazáribágh, and Manbhum; while falls less than 20 per cent. of the normal were received in Cuttack, Balasore, Nadia, Jessore, Backergunge, Dacca, Darjeeling, South Bhágálpur, and Lohardaga.

The principal features of the monsoon season of 1891 were therefore as follows:—

1. The actual monsoon rains set in over Bengal about a fortnight later than usual, and the rains did not break until June 27th or 28th.

2. Even from the period of the commencement of the monsoon up till its close, the monsoon current was particularly weak, and gave generally only very light rain to practically the whole of Bengal.*

3. About the normal number of barometric depressions or feeble cyclonic storms were formed in the Bay during the monsoon, but these showed an unusually strong tendency to advance through Orissa into the Central Provinces, Chota Nagpur, &c.

4. Hence rainfall was frequently in excess of the normal in Orissa, while it was in defect in all other districts, and for the monsoon season, while Orissa received about 10 per cent. more rainfall than usual, the other divisions received from 10 to 30 or even 40 per cent. less than usual, the largest defects, equalling about 30 to 40 per cent., occurring in parts of North Bengal and North Bihár.

5. The monsoon current also retreated from Bengal very much earlier and much more rapidly than usual, the rainfall ceasing on about the 5th of October, instead of in the middle of the month as in normal years, and the closing of the rains was thus about ten days earlier than usual.

6. As the monsoon began a fortnight late, and closed ten days earlier, the monsoon period was unusually short, and extended over only a little more than three months.

7. No storms of importance were formed in the earlier part of the retreat of the south-west monsoon down the Bay, and October was an unusually quiet month.

The settled weather which had characterised October was in marked contrast to the stormy weather of November, which month will be remembered for the extreme fierceness of two cyclonic storms which visited the Bay of Bengal—one at the commencement and the other towards the close of the month.

In Bengal itself for the first three or four days weather was fine and generally of ordinary cold season type, but from the 4th or 5th all the south-western districts became influenced by the first of the two storms advancing into the north of the Bay.

The cyclone of the early part of November was a small one in diameter, but its fierceness was very great and was quite equal to the majority of cyclones which have been previously described. This cyclone was generated in the Gulf of Siam, and crossed the Malay Peninsula into the Andaman Sea. It crossed Port Blair on the night of the 1st and morning of the 2nd. Even at this time it was a very severe storm, though the diameter of the hurricane winds was probably not more than eighty or one hundred miles, and it did a

* Cold-weather months, November and December.

large amount of damage both at sea and on land at the Andamans. It then moved first in a west-north-westerly and then in a north-westerly direction towards the Ganjam Coast, and as it began to approach that coast it increased very decidedly in intensity and became one of the most severe storms on record. On the morning of the 4th it was to the south-east of Gopalpur, but as it approached the coast it changed the direction of its movement and travelled first in a northerly and then in a north-easterly direction. The centre passed over False Point on the afternoon of the 5th, and passed over the Intermediate Light-vessel off the mouth of the Hooghly at 2-30 A.M. of the 6th.

It then passed through South Bengal between Saugor Island and Chittagong, and passed through East Bengal into Cachar and perhaps Upper Burma or Upper Assam. In its progress it did a large amount of damage to the shipping and on land, but as it passed into South Bengal it commenced rapidly to decrease in intensity and soon became a feeble storm. It brought up exceptionally heavy rain to Orissa, Puri receiving 13·61 inches, Kendrapada 16·7 inches, &c., during the storm; but the rainfalls in South and East Bengal were much lighter.

Another very remarkable feature in connection with this cyclone was the rapidity with which the disturbed weather produced by it disappeared, and was replaced by fine settled weather of the ordinary cold season type, and by the morning of the 8th weather was fine over the whole Province, and remained so up till about the 12th. At this time disturbed squally weather set in over the centre of the Bay, and immediately the sky commenced to cloud over in all districts except Bihār and North Bengal, and a few showers began later on to fall in South and South-East Bengal. The disturbance in the Bay, however, at this time did not concentrate,* but continued to give squally weather and rather strong winds in the centre of the Bay, almost without interruption until about the 19th, when a distinct storm began to form at a considerable distance to the west of the Andamans. This storm became more intense on the 20th and 21st, and then advanced in a north-easterly direction, slowly at first, and afterwards as it approached the land its velocity of advance and intensity increased rapidly, and it crossed the Arakan Coast between Diamond Island and Akyab soon after noon on the 23rd and probably near Sandoway, when it broke up rapidly in the Arakan hills. It was a cyclone of great intensity and considerable extent, and caused a good deal of damage at sea, but on the other hand, it gave a burst of rather heavy rain to Burma, where it was urgently required.

As usual, the disturbed conditions in the Bay reacted on the weather in Bengal, and skies became almost overcast, temperature became largely above the normal, and conditions were the reverse of those usually obtaining in the cold weather, and such conditions obtained until towards the close of the month. Again, during this period of disturbance a few showers were received at the southern and eastern stations of the Province, but from about the 29th or 30th weather once more became of the normal north-east monsoon character.

The rainfall, therefore, of November was extremely heavy in Orissa and moderately heavy in South-West and East Bengal, and also heavier than usual in North Bengal, but Bihār and Chota Nagpur were practically rainless. An average fall of six and-a-quarter inches was reported in Orissa—nearly five inches more than usual; South-West Bengal received a fall of an inch, and East Bengal of nearly two inches—in both cases about two-thirds of an inch more than usual, while North Bengal received the average fall of six-tenths, or more than four-tenths in excess.

The rainfall, however, was not evenly distributed, and in North Bengal the falls were particularly irregular. The district of Bogra received two inches, Pabna and Rajshahi about an inch, and the remainder almost none at all. The whole of North Bihār was rainless, and the whole of South Bihār was also practically rainless, except the Sonthal Parganas district, where a little less than half an inch fell. In Chota Nagpur the falls in the Singhbhum district averaged nearly half an inch, while the Hazaribagh, Lohardaga, and Manbhum districts received falls varying up to about a fifth of an inch. In the other Divisions the falls were more copious and also rather more regular. In East Bengal, Tippera received four inches, Dacca about two and-a-half inches, Chittagong Hill Tracts and Faridpur about

two inches, and Chittagong, Backergunge, Noakhali, and Mymensingh from one to one and-a-half inches. In South-West Bengal, the Saugor Island district received two and-a-half inches, Jessore, Khulna, Murshidabad, and Birbhum between one and two inches, Nadia, Bankura, Burdwan, and 24-Parganas about half an inch, and Midnapore, Howrah, and Hooghly about a quarter of an inch. The falls were particularly heavy in Orissa, where the Puri and Cuttack districts received an average fall of about eight inches, and the Balasore district about four inches. It will therefore be seen that the meteorology of November was very important, in so far as the rainfall was concerned.

The variations of pressure during the month were considerable, but the mean pressure was almost normal. Distinct defects of about $0.02''$ were recorded in Orissa and the neighbouring parts of South-West Bengal, while, on the other hand, at many of the northern stations slight excess pressures were recorded. Owing to the disturbed conditions during the month and to the partial absence of the usual cold-weather conditions, temperature was in rather large excess in all districts except Orissa, the usual excess equalling from about one to two and-a-half degrees, but in Orissa temperature was nearly normal. Humidity and cloud proportion were also very decidedly in excess of the normal.

The meteorological conditions in December do not call for any detailed comment. There was a complete absence of the cold-weather storms originating in or coming from North-West India, and which in most years pass through Bengal in December, particularly in the second half of the month. There was also a complete absence of anything like cyclonic storms, such as sometimes occur in December in the southern half of the Bay of Bengal, and only two very feeble barometric depressions were formed over that area, which were not sufficiently influential to materially affect the weather conditions in Bengal. Weather, therefore, was fine almost throughout the month, and, except for a few light showers in the Chittagong district, there was no rain during the month over the whole Province. Rainfall was therefore in defect in all divisions, but as the highest normal fall in December only equals about a third of an inch in the East Bengal Division, the deficiency was not important.

The mean pressure in December was unusually high, and the excess pressure ranged from about $0.03''$ to $0.04''$ in the south-western districts to $0.06''$ to $0.08''$ in Bihár. Temperature was also in excess of the normal in all the seven meteorological divisions of Bengal, ranging from one to two degrees, while both humidity and cloud proportion were somewhat higher than usual.

The above statement gives a brief general summary of the weather conditions, month by month, throughout the year in Bengal; but to make the summary rather more complete, a further brief statement is added, dealing singly with the usual meteorological elements of pressure, temperature, humidity and cloud proportion, and wind, and giving also a rather more detailed description of the more important storms of the year, and a brief summary of the rainfall of the Province.

For the cold-weather period of January and February, and for the whole

Pressure.

of the hot season previous to the setting in of the monsoons, the general pressure conditions were abnormal, and unusually high pressures were recorded in four out of the five months, the excess usually ranging from two to four-hundredths of an inch. This condition was probably closely connected with the abnormally heavy snow-fall which had occurred in the Himalayas in the early part of the year, which has been referred to in the previous part of the summary, and these two conditions undoubtedly had the effect of retarding the setting in of the monsoon current for at least a fortnight, and of making the monsoon current one of the lightest on record. This excess pressure was, however, not quite general, and there was a local deficiency in Assam and Upper Burma, which had the effect of deflecting the monsoon current towards that area. At the commencement of the monsoon the pressure for June was almost normal, but in July there was a very distinct defect, amounting to about $0.03''$ to $0.05''$, which may perhaps account for the fact that the monsoon current was fairly strong in that month. In August pressure again became practically normal, except that in the north-

west angle of the Bay there was a tendency to slightly low pressure, and this defect apparently determined the position of formation of a considerable number of barometric depressions during the month. In September pressure was very slightly below the normal, the defect equalling about two-hundredths of an inch only, but in October, with the unusually early withdrawal of the monsoon current and the commencement of northerly winds over the Province, pressure became from 0.04" to 0.06" in excess of the normal. In November the pressure changes were excessive, owing partly to the cyclone of the early part of the month, which gave unusually low pressure, but notwithstanding this, the general pressure for the month was normal, owing to the pressure during the greater part of the month being decidedly high. In December, also the high pressure which had obtained during a considerable part of November and during October still continued, and pressure was 0.05" in excess of the normal. The pressure variations for the year may be therefore summed up by saying that in the pre-monsoon months pressure was rather considerably in excess, during the unusually short monsoon it was generally in slight defect, and during the transition period of October and in the cold-season months it was in rather large excess, and thus the average pressure of the year was in distinct excess of the normal.

In the month of January, owing perhaps to the lightness of the rainfall over a considerable part of the Province, the mean temperature was slightly in excess of the normal. In February, when the number of barometric depressions over Northern India

Temperature.

was rather larger than usual and when the rainfall over Bengal was decidedly heavy, the mean temperature of the Province was naturally in defect of the normal. March was a month of most abnormal character, and for the greater part of the time numerous storms with rain visited Bengal, and hence the mean temperature became no less than four degrees below the normal. This large defect was neutralized in April, and the temperature of this month was practically normal, but there was again a small defect of about half a degree in May, due apparently to the unusual heaviness of the rainfall. From June to September inclusive, or during the monsoon season of 1891, temperature was slightly in excess of the normal, this excess being probably due to the extreme lightness of the rains. The excess was largest in June, when it equalled about 1.2°, but in the other months it was usually about half a degree. In October, on the other hand, the cool northerly wind current set in earlier than usual, and hence the mean temperature of October was below the normal. The temperatures of the two cold-weather months of November and December were in decided excess of the normal, the excess in November averaging about 2° and in December varying from 1° to 2°. For about seven months of the year, temperature was then higher than usual, this excess occurring in January and in six out of the last seven months of the year; while, on the other hand, temperatures decidedly lower than usual occurred in three out of the first five months.

Humidity and cloud proportion were generally in distinct excess over the normal for the first five months of the year.

Humidity and cloud proportion.

During the rains from June to September inclusive they were practically normal in amount, but in October the skies cleared unusually rapidly, while the damp monsoon winds also retreated more quickly than usual, and hence both humidity and cloud proportion were in distinct defect. In November and December the opposite conditions obtained, and for these two months both humidity and cloud proportion were decidedly higher than usual.

In January the cold-weather winds were decidedly steadier than usual, but they were rather more northerly in direction,

Winds.

and in February also the northerly winds were rather steadier and stronger than usual. In March usually the southerly winds from the Bay almost entirely drive back the northerly and north-westerly winds which blow during January and February, but owing apparently to the same cause which made these winds stronger than usual, and which cause was undoubtedly the excessive snowfall in the Himalayas, the northerly element continued in March for a certain period, and the southerly winds were not strong enough to entirely force back the northerly current coming

from Northern India and the hills to the north. Hence the winds in March were remarkably unsteady, south-easterly and north-westerly winds alternating with each other, and the latter, on the whole, preponderating, so that the winds for March were very abnormal in character. In April winds were rather more westerly than usual at the inland stations and more southerly at the Bengal and Orissa stations, thus comprising a combination which has been experienced for four years previously. In May also winds were also much steadier than usual, and stronger and less westerly in the north-west angle of the Bay. In June, again, winds were stronger and rather more westerly than normal at the inland stations and less westerly at the coast stations, and in July, again, winds were above the normal strength and more westerly. In August the monsoon current had deflected more into Burma than usual, while the current itself appeared to be about ten per cent. stronger than the normal, while again in September the Bay of Bengal current was stronger than usual, while winds were steadier and stronger than the normal in Bengal. In October winds were unusual, and instead of the light variable airs which in most years characterise this month, a fairly steady westerly and north-westerly wind was reported. This was particularly the case in Bihâr, and to a smaller extent also the case in Bengal. In November the northerly element in the wind directions was stronger than in normal years, and the usual westerly element had been replaced by an easterly element, both of which changes are probably accounted for by the occurrence of the two cyclonic storms in the Bay, and by the existence of disturbed weather in the Bay for a considerable period in the month. Again, in December the northerly element in the winds was above the normal strength, and the unusual easterly element found in November had disappeared, while winds were distinctly less steady than usual, and wind velocities were lower than the normal.

The storms which occurred in the first four months of the year do not require any more detailed record than is given in a previous part of the summary, and hence the first storms to be mentioned are the two small storms which formed in the Bay in May. Even in this month the second storm was of so feeble a character that what has been said in the previous account of the meteorology of May will be sufficient. The first storm of May, however, demands a more detailed account, for at any time it might have developed into a severe storm.

The small but feeble storm in May was formed in front of the first advance of the south-west monsoon current on about the 19th or 20th of May, and on the latter date there was a well-defined barometric depression off the Coromandel Coast, the centre of which was probably in about lat. 10° N. and long. 82° E., and this was giving very squally weather over a considerable part of the Bay. The storm then concentrated and developed slightly, and advanced slowly northward on the following two days, when on the 22nd the centre was probably in lat. $12\frac{1}{2}^{\circ}$ N. and long. 83° E. On the 23rd, 24th, and 25th it had again advanced until it was probably in about lat. 17° N. and long. $84\frac{1}{2}^{\circ}$ E., but it then began to fill up, and there was no trace of its existence on the 28th. It moved forward nearly in a northerly direction at about the rate of 100 miles a day, but the storm never passed beyond the early stages of cyclonic formation, and only squally weather was produced by it at sea.

In June there were no cyclonic storms at all, and in July only one storm of importance was formed towards the close of the month. This was formed on the afternoon and evening of the 24th near the mouth of the Hooghly, and by the morning of the 25th a well-marked depression covered South-West Bengal and the north-west angle of the Bay. Soon after its formation it commenced to move slowly in a westerly direction; but though the depression was only of very moderate intensity as shown by the barometer, yet a gale of wind was blowing at the head of the Bay. On the 26th the centre of the storm was in Chota Nagpur to the west-north-west of Chaibassa, and even on this day a strong gale was reported by some of the ships navigating the head of the Bay. The storm on the 27th had almost ceased to affect Bengal, but it was a very influential and persistent storm, for it travelled practically unbroken in a west-north-westerly direction into Upper Sind and Western Rajputana, where it filled up on the 30th. In August there were four feeble barometric depressions and one rather severe storm in the Bay, but only the

last-named and one of the depressions need be briefly described. The small cyclonic storm was formed on July 31st in the northern half of the Bay off the Arakan Coast; it steadily developed in strength, and on the 1st of August it was in about lat. $20^{\circ}15'$ N. and long. 91° E. It then moved in a north-westerly direction, at first slowly and then with gradually increasing speed. On the 2nd the centre was in lat. $20^{\circ}45'$ N. and long. $89^{\circ}30'$ E.; on the 3rd the storm was crossing the coast near Balasore, and the centre was in lat. $21^{\circ}30'$ N. and long. 86° E., and on the 4th it had passed into Chota Nagpur and was rapidly filling up. This storm gave a heavy gale of wind at sea, and also brought up moderate rain to the whole of Bengal. The only barometric depression in August of importance as a storm was formed on the 11th or 12th with a centre near Jessore, which, after intensifying to a moderate extent, moved, first in a westerly and then in a north-westerly direction, finally filling up in the western districts of the North-Western Provinces on the 17th, and during its passage through Bengal it gave very heavy rain. The peculiarity of this storm was that the winds for a considerable distance round the centre were very light, and the winds blowing some 80 or 100 miles to the south-east and south of the centre were extremely strong, and while almost calms prevailed in South Bengal, gales of almost hurricane force were blowing at the head of the Bay and for a certain distance out at sea.

In September no less than five barometric depressions were formed, but one only of these deserves notice from the peculiarity of its formation. This depression existed from the 19th of September to the 3rd of October. It appeared first as a well-defined depression with a cyclonic circulation of winds which was advancing to Tenasserim from Upper Siam. From the sudden appearance of the small storm and its line of advance, it is almost certain that the depression originated quite outside of the Indian area, probably in Upper Siam or perhaps in the China Sea. On the 20th the depression had advanced into the northern angle of the Andaman Sea; it then passed out through the Prepara Channel into the Bay of Bengal, across which it moved rapidly in a west-north-westerly direction, and reached the Orissa Coast a little to the south of False Point about 5 P.M. on the 22nd. It then continued its westerly advance, and afterwards moved in a northerly and finally in a north-easterly direction, filling up in the eastern districts of the North-West Provinces and in Bihár in the early part of October. In October the only depression which occurred was a shallow area which formed in the south of the Bay and gave heavy rain on the Coromandel Coast.

In November two exceptionally severe cyclones occurred. The following description of them is taken mainly from the Weather Report for November by the Meteorological Reporter to the Government of India:—

The first storm was one of the most remarkable cyclones of recent years; first, from the unusual place of its formation; second, from the curiously curved path it took; and third, from its extreme intensity. The position of the centre of the storm from day to day while it existed as a violent cyclone, so far as its history has yet been worked out, and its daily rate of motion, were as follows:—On the 31st of October at 8 A.M. it was in lat. $10^{\circ}45'$ N. and long. 100° E. On the 1st November it was in 11° N. and 96° E., having travelled 280 miles; on the 2nd it was in lat. $12^{\circ}15'$ N. and long. $91^{\circ}45'$ E., having travelled 285 miles; on the 3rd it was in lat. $14^{\circ}0'$ N. and long. $88^{\circ}30'$ E., and had travelled 270 miles; on the 4th it was in lat. $16^{\circ}30'$ N. and long. $86^{\circ}15'$ E., and had travelled 225 miles; and on the 5th at 8 A.M. it was in lat. $19^{\circ}30'$ N. and long. $86^{\circ}40'$, and had moved through 220 miles. On the 5th at 4 P.M. it was about lat. $20^{\circ}20'$ and long. $86^{\circ}47'$, and had moved through 60 miles; and on the 6th at 2-30 A.M. it was over the Intermediate Lightship station at the Sandheads, and had moved 90 miles; while at 8 A.M. it was 40 miles east of Saugor Island, and had travelled 50 or 60 miles. The depression filled up on the 7th, and the observations of the morning of the 8th showed no trace of its existence.

The preceding statement indicates that the rate of motion, when it was advancing on the 31st, 1st, and 2nd on an approximately straight north-west by west course, averaged 12 miles per hour, but that as it recurved on the 4th, 5th and 6th its velocity diminished to an average of 8 miles on the afternoon of the 5th and morning of the 6th. Its velocity at this stage was hence unusually small, considering the intensity of the cyclone.

The following are the most noteworthy features of this remarkable storm :—

- 1st.—It originated outside the Indian area in the Gulf of Siam, and crossed the Malayan Peninsula in about lat. 10° N., thence passed into the Andaman Sea and Bay of Bengal. This part of the Malayan Peninsula is comparatively low ground, and offered no resistance to the passage of the cyclone.
- 2nd.—Its path in the Bay of Bengal recurved to a very unusual extent. As a rule the tracks of storms in the Bay are approximately straight. The path of the centre of the cyclone in question recurved through north-west, north and north-east to east-north-east, and described a curve approximately parabolic in form.
- 3rd.—The storm was apparently almost unchanged in character from the 30th or 31st to noon of the 6th. It was during the whole of this period a cyclone with a calm centre, and an inner storm area of 50 to 70 miles in diameter in which hurricane winds prevailed. The storm was, so far as can be judged from the descriptions, as severe in the Gulf of Siam as it was when passing over Port Blair, False Point, and the light-vessels at the entrance to the Hooghly. It was remarkably persistent and permanent in character during the whole of this period.
- 4th.—It filled up with very great rapidity shortly after it entered and as it approached the hills of East Bengal and Assam. The rapidity and completeness of the disintegration of the storm on the night of the 6th and morning of the 7th are even more remarkable than its previous persistence.
- 5th.—It was remarkable even when compared with previous cyclones in the Bay for the violence of the winds and the excessive rainfall which accompanied it.
- 6th.—The observations indicate that the heaviest rainfall occurred in front of the advancing storm centre (or in the advancing quadrant), and that winds were most violent in the south and east quadrants.

The cyclone which occurred in the second half of November was also one of great intensity and considerable extent. It was generated in the central area of the Bay midway between the Andamans and the Coromandel Coast. For some days previous to its formation there was a shallow barometric depression in the south of the Bay, and conditions were generally favourable to the formation of a storm, which commenced to form on the 18th and 19th, probably in the centre of the area of depression. It developed with great rapidity on the 20th and 21st, and began to move slowly in a north-easterly direction. From the 20th to the 21st it had probably only advanced by about 72 miles, and from the 21st to the 22nd by about 90 miles, and on the morning of the 22nd it was probably in lat. $13\frac{1}{2}^{\circ}$ N. and long. $89\frac{1}{2}^{\circ}$ E. As it approached the Burma coast the rapidity of its advance increased largely, and its velocity increased from about 3 or 4 miles an hour to 13 or 14 miles, and at 3 A.M. of the 23rd the storm centre was in lat. 16° N. and long. $92\frac{1}{2}^{\circ}$ E. From 3 A.M. of this day to 8 A.M. the forward velocity of the storm equalled nearly 20 miles an hour, and the storm centre passed inland on this day, probably about noon, in the neighbourhood of Sandoway or between Akyab and Diamond Island. Both of these set storms, and the first in particular, did a very large amount of damage to the shipping, etc., several ships being either entirely lost or very heavily damaged by the storms.

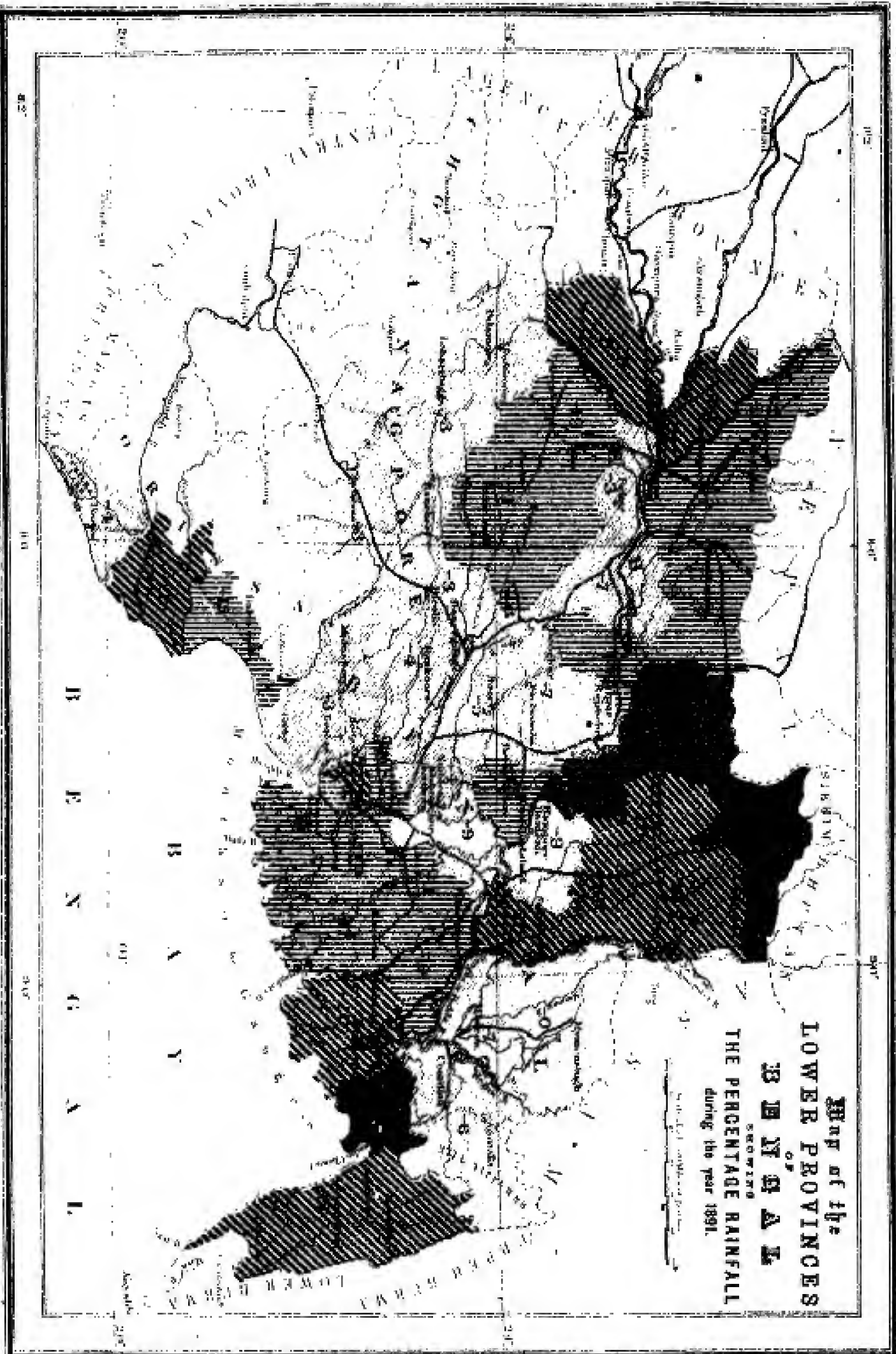
In December there was a complete absence of storms.

The rainfall in January 1891 over the Province generally was not very far from the normal amount; but while Bihár and Chota Nagpur received slight excess falls, defective falls were registered in Orissa and in South-West, East and North Bengal, which made the general

average for the Province appear more normal. The usual falls in January are, however, only moderate in amount, and thus small actual amounts

RAINFALL.

Pre-monsoon season.



in defect or excess appear as rather large amounts when expressed as a percentage. February and March were months of most abnormally heavy rainfall in practically all districts, and during this period the Province generally received about three inches more rain than in normal years. April, on the other hand, was a month in which the falls were in defect in all divisions except East Bengal, but, generally speaking, the defects did not represent any very large percentage of the normal fall. In dealing with rainfall statistics, it is usual to consider the rainfall of May as being part of the monsoon rainfall, for though the actual south-west monsoon does not break, and though the real rains cannot be said to commence in Bengal until June, yet the rainfall in May is really brought up by the partial action of the same large causes which produce the rains in June. Indeed in the year under review a very considerable part of the rain in May in Bengal was due to the advance of feeble depressions which had formed in the Bay in front of the first large advance of the monsoon current. Hence it may be stated that for the pre-monsoon months of January to April inclusive, the rainfall of Bengal was on the whole abundant.

The falls in these months are, however, most clearly understood by expressing the actual falls as a percentage of the normal fall for the same period, and this is done in the table below. From this table it will be seen that the rainfall in the pre-monsoon months of 1891 was in rather large excess in nearly all divisions: the excess was moderate in East Bengal, equalling 33 per cent., and large in all other divisions; the excess in South-West Bengal and North Bengal being larger than 50 per cent., and in Orissa larger than 80 per cent. The fall was more than twice the normal in North Bihâr and Chota Nagpur and nearly three times as large as the normal in South Bihâr:—

Rainfall of January to April 1891 expressed as a percentage of the normal fall.

Meteorological districts.	January.	February.	March.	April.	Actual fall of first four months of 1891 expressed as a percentage of the normal fall for the period.
Orissa	11	167	424	36	182
South-West Bengal	53	193	308	50	155
East Bengal	2	311	98	130	133
North Bengal	78	377	239	77	156
North Bihâr	171	233	590	19	203
South Bihâr	253	159	734	30	290
Chota Nagpur	163	91	506	30	235

In May, owing to the frequent occurrence of local storms with rain and to the action of two depressions from the Bay, the rainfall was very heavy; excess falls of one to two inches being received in Orissa, South Bihâr, and Chota Nagpur; of two to four inches in North Bihâr, North Bengal, and South-West Bengal; and of nearly five inches in East Bengal, representing excess amounts of from thirty-four to seventy-two per cent. of the normal. In June, however, owing to the actual monsoon rains being about a fortnight late in establishing themselves, the rainfall was exceptionally small, and the Province generally received about four and-a-half or four inches of rain less than usual, and Bengal generally only received about 62 per cent. of the normal fall. The falls for June were not only exceptionally deficient over the whole Province, but considerable parts of Orissa received practically no rain at all, and extremely deficient falls also occurred in the districts of Lohardaga, Jalpaiguri, Chittagong, Bardwan, Balasore, Birbhum, Dinajpur, Rangpur, Purnea, and Singhbhum. In July, owing to the unusual lightness of the monsoon current, the falls in all divisions but North Bihâr were decidedly deficient, the deficiency being very large in Orissa and

Bihár. So large indeed was the deficiency in this month in certain areas that Shahabad only received about a third of the normal fall for the month, and Saran, Puri, and the Howrah districts only about half the usual amount.

In August the rainfall was nearly four and-a-half inches more than usual in Orissa, and in defect over the remainder of the Province, the defect being rather small in Chota Nagpur, South Bihár, and South-West Bengal, and very large elsewhere, a deficiency of more than four inches occurring in North Bihár, of five and-a-half inches in East Bengal, and of seven and-a-half inches in North Bengal. The actual rainfall over the whole Province, even including Orissa, where the fall was about 40 per cent. in excess, shows a defect of nearly twenty per cent., and in such districts as North and East Bengal and North Bihár the defects equalled from 54 to 35 per cent. September was again a month of excessive rainfall in Orissa, the excess being more than eight inches, and of about normal fall in Chota Nagpur, but all other divisions showed defects, the deficiency being about three inches in South-West Bengal and South Bihár, about six inches in East Bengal and South Bihár, and eight and-a-half inches in North Bengal. In this month, therefore, the extreme lightness of the monsoon current of 1891 again made itself felt most strikingly. Excluding Orissa and Chota Nagpur, in the districts where the falls were less than usual the defect equalled 50 per cent. of the normal in September, and in North Bengal and North Bihár the defect was equal to nearly 75 per cent. The weakness of the monsoon current was further illustrated in October by the unusually early date of its withdrawal from Bengal, and in this month only an average rainfall of one or two inches is reported, whereas in normal years from three to six inches is generally received; and thus the rainfall of the whole of Bengal for October only equalled 31 per cent. of the normal, and in Orissa, South-West Bengal, and Chota Nagpur the defect was about 80 per cent.

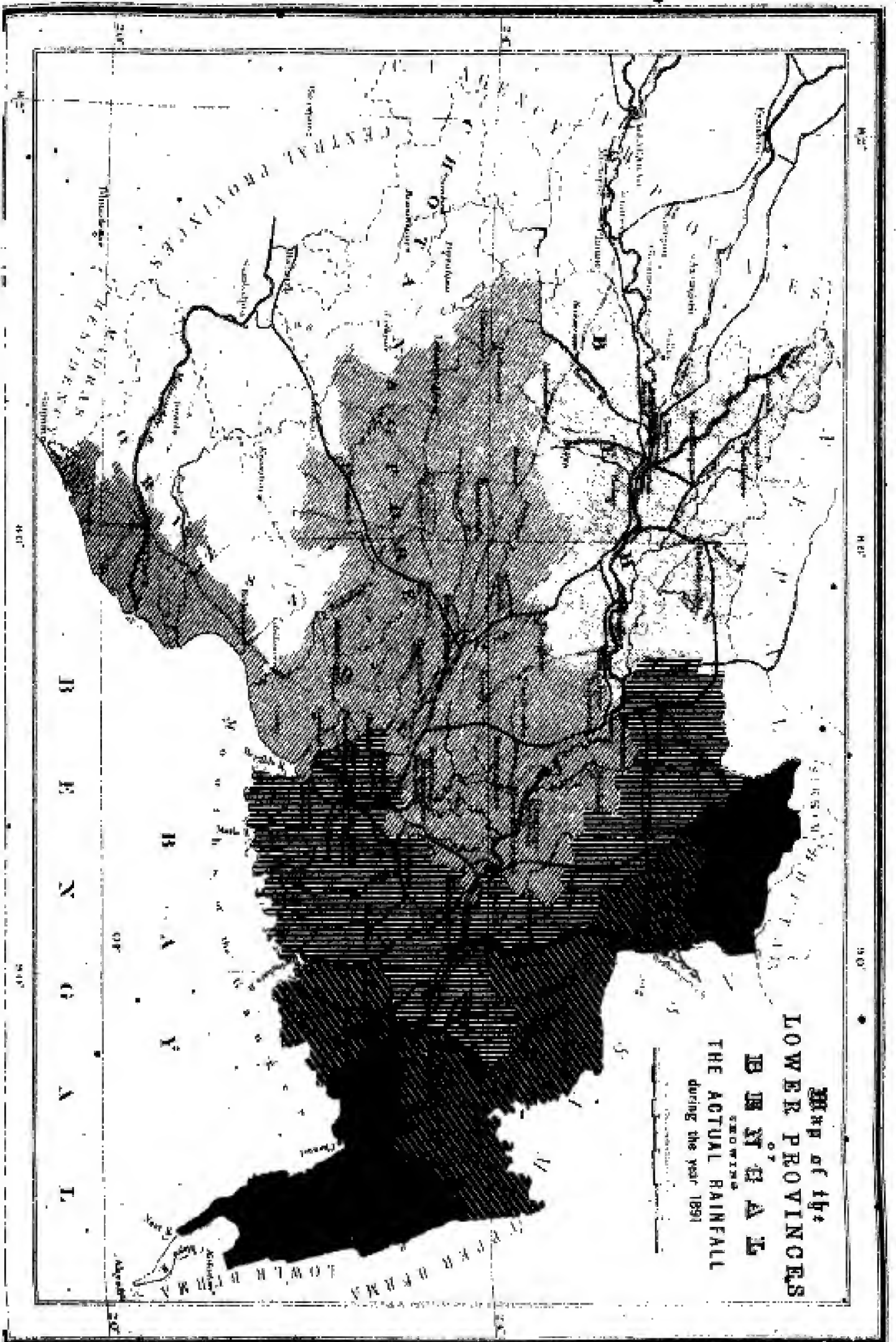
It is usual in considering the rainfall of the monsoon period to close with the month of October, but the severe cyclone of the early part of November which passed through Bengal brought up heavy rainfall in its path, and also caused a feeble wave of moist winds to pass over parts of Bengal. Hence this may be taken as a continuation of the monsoon rainfall, and the rainfall for the first half of November may be considered under this section. The rainfall brought up in this way was mainly confined to Orissa and parts of South-East and North Bengal, Orissa receiving about six and a-quarter inches, East Bengal nearly two inches, South-West Bengal about one inch, and North Bengal a little more than half an inch. The falls in these districts, therefore, in the first half of November, were from about six times to twice as large as the usual falls for the period.

Except, therefore, for the unusual rainfall in November, it may be said that the monsoon rains were exceptionally light throughout the whole period, which was also an unusually short one, being shorter than the usual rainy season by about a month.

The following tables give briefly the amount and variation of the rainfall in each of the seven meteorological divisions, month by month, for the monsoon season—the 1st of May to 15th November, inclusive:—

Actual Rainfall in inches.

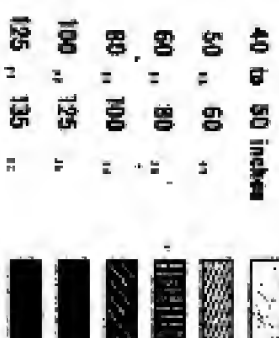
METEOROLOGICAL DIVISIONS.	May.	June.	July.	August.	Septem- ber.	October.	1st— 15th Novem- ber.	Year.
Orissa ...	5.18	2.42	9.29	15.89	18.45	1.81	6.24	58.78
South-West Bengal ...	9.18	6.17	11.22	10.73	6.45	0.73	0.98	46.46
East Bengal ...	14.02	12.97	16.52	10.38	6.10	1.73	2.02	63.74
North Bengal ...	11.91	9.38	16.45	6.36	4.96	2.02	0.60	51.68
North Bihár ...	5.50	8.16	10.23	7.48	3.43	1.87	Nil	36.16
South Bihár ...	3.05	5.63	10.30	9.47	4.50	1.50	0.11	36.46
Chota Nagpur ...	3.92	3.74	12.74	12.62	8.92	0.53	0.14	42.61



REFERENCES

Districts in which the Rainfall recorded

was—



Variation of actual Rainfall from the average in inches.

METEOROLOGICAL DIVISIONS.	May.	June.	July.	August.	Septem-ber.	October.	1st—15th Novem-ber.	Year.
Orissa	+ 1.31	— 6.37	— 3.21	+ 4.48	+ 8.20	— 4.85	+ 5.33	+ 4.89
South-West Bengal	+ 3.78	— 3.97	— 0.73	— 1.98	— 2.59	— 3.60	+ 0.70	— 8.44
East Bengal	+ 4.76	— 5.19	— 0.08	— 5.58	— 5.98	— 3.70	+ 1.25	— 14.52
North Bengal	+ 3.39	— 8.19	+ 2.37	— 7.61	— 8.46	— 2.36	+ 0.46	— 20.30
North Bihār	+ 2.90	— 0.57	— 2.11	— 4.12	— 6.42	— 2.17	— 0.03	— 13.12
South Bihār	+ 1.56	— 1.12	— 1.73	— 1.91	— 3.48	— 1.80	— 0.01	— 8.49
Chota Nagpur	+ 1.27	— 4.24	— 0.42	— 0.94	+ 0.21	— 2.44	— 0.07	— 8.63

Variation expressed in a percentage of the normal fall.

Orissa	+ 34	— 72	— 26	+ 30	+ 80	— 79	+ 585	+ 9
South-West Bengal	+ 70	— 39	— 7	— 16	— 29	— 83	+ 250	— 15
East Bengal	+ 51	— 29	— 1	— 35	— 49	— 68	+ 162	— 18
North Bengal	+ 40	— 47	+ 17	— 54	— 63	— 54	+ 329	— 28
North Bihār	+ 72	— 7	— 17	— 36	— 65	— 61	— 100	— 27
South Bihār	+ 65	— 17	— 14	— 17	— 44	— 55	— 9	— 19
Chota Nagpur	+ 48	— 53	— 3	— 7	+ 2	— 82	— 33	— 13

Finally, the rainfall of the whole Province from May to 15th November inclusive averaged 47.70 inches, while the normal fall for the period is 55.79, so that the actual fall was in defect of the normal by 8.09 inches. Expressed as a percentage, the actual rainfall of the Province of Bengal for the monsoon season of 1891 was therefore in defect of the normal by about 15 per cent.

For the second half of November rainfall was confined to a few small showers in the southern districts, brought up by the disturbed conditions induced by the second cyclone in the Bay in the latter half of November, but the amounts were so small that rainfall may be considered to have been practically absent in this period. In December also scarcely a single station in the whole Province reported any rain whatever, and the Province was therefore practically rainless. The cold-weather rains of 1891-92 up to the end of December 1891 therefore practically entirely failed to appear.

The general rainfall of the year may thus be described by saying that in the first four months rainfall was much more abundant than usual. It was unusually light and very defective practically throughout the whole of the monsoon season, while the cold-weather rains did not appear at all at the end of the year. Hence, as the main amount of rainfall comes in the monsoon months, the general rainfall of the year was also rather largely in defect of the normal, the defect for the year exceeding 20 per cent. in North Bengal and North Bihār, being 10 per cent. and upwards in defect in South-West Bengal, East Bengal, and South Bihār, and 7 per cent. in defect in Chota Nagpur; while, on the other hand, in Orissa the fall was 12 per cent. in excess of the normal for the year.

The rainfall statistics of the Province are illustrated by two maps: the first giving the actual rainfall, the depth of rain being shown by the depth of colour, and the second the percentage variation from the normal for the year, the excess falls and their amount being shown by the variation in depth of one colour, and the defective falls being shown in a similar way in a second colour. The comparison of the total annual rainfall of 1891 with that of normal years is, however, not perhaps of such great value this year as is generally the case, owing to the variation in the falls at the different seasons being of complementary character. And thus, while there was very considerable excess rainfall

in 1891 at a period when it could have been of little or no benefit to the crops, on the other hand, during the season when rainfall was most urgently wanted, it was at one time practically entirely absent, and for a considerable period in very large defect of the normal.

The largest actual rainfall at any station in the Province for the year 1891 was 135·51 inches at Buxa in the Darjeeling district, and the smallest fall of 19·15 inches at Daudnagar in the Gaya district, but in the latter case the accuracy of the rainfall record is rather doubtful. Generally the heaviest falls of rain have occurred in the Darjeeling, Jalpaiguri, Chittagong, and Noakhali districts, where the amounts have been from about 130 to 120 inches, but in these cases the falls are from about 40 to 25 inches smaller than usual. The areas of greatest rainfall, therefore, it will be seen, were as usual in the north-eastern and eastern districts, and from these areas the falls gradually decrease in amount in a westerly direction until in the western districts of Bihār average district falls of only 40 to 45 inches are recorded; the smallest fall of all being in Shahabad with 41·76 inches and in Patna, Gaya, Saran, Muzaffarpur, Darbhanga, and Monghyr, where the falls varied from forty-two to forty-seven inches. The falls in these districts were also unusually small, Shahabad receiving about twelve inches of rain less than usual, Saran ten inches less, Gaya eight inches less, Muzaffarpur and Darbhanga about five inches less, Monghyr three inches less, and Patna only one inch less. Between the heaviest rainfall in the east and north-east of the Province and the lightest falls in extreme west, the falls gradually decrease from east to west. Most of the districts in North and East Bengal, except those previously mentioned, have received falls of from sixty to eighty inches, and the whole of the remainder of the Province has received roughly between 50 and 60 inches. In several districts the rainfall has been 15 inches and upwards in defect of the normal, and this is the case in Howrah, Rangpur, Backergunge, Purnea, and Malda, while the defects exceeded ten inches in Hooghly, 24-Parganas, Khulna, Dinajpur, Bogra, Pabna, and Faridpur.

When the actual falls for the whole of 1891 are expressed as a percentage of the normal, the districts which show the largest defect are—Malda 34 per cent., Purnea, Noakhali, and Darjeeling 31 per cent., Jalpaiguri 30 per cent., and Howrah and Shahabad 29 per cent., while falls have been 20 per cent. and upwards in defect in Dinajpur, Rangpur, Bogra, Pabna, Backergunge, Chittagong, and Saran. On the other hand, Cuttack showed an excess fall of 22 per cent., Balasore one of 15 per cent., and small excess falls were shown in Burdwan and Midnapore.

Weather, Crops and Prices, and Material Condition of the People.

THE following is a brief account of the results of the harvests, of the prices prevailing, and of the economic condition of the people in the several Divisions of Bengal during the year 1891-92.

The average rainfall in each of the districts of
the Burdwan Division during the past three years
has been as follows:—

		1891-92.	1890-91.	1889-90.
		Inches.	Inches.	Inches.
Burdwan	...	47.29	71.48	47.00
Bankura	...	47.32	61.92	55.14
Birbhum	...	50.91	70.17	53.16
Midnapore	...	50.19	59.83	52.92
Hooghly	...	40.05	69.19	43.00
Howrah	...	38.31	54.00	51.48

The weather on the whole was not favourable to agricultural operations, the rainfall being short and unevenly distributed. The early stoppage of the rains in September, and their total absence in October, materially affected all crops, except sugarcane, and rendered the outturn much below the average. The winter crops in Bankura also suffered from a flight of locusts, which passed over many parts of the district.

The prices of rice and other food-grains rose steadily in all districts throughout the year. Wages remained stationary. In Raniganj wages are said to be gradually rising, owing to the steady development of the mining and other industries.

Though the year was one of bad crops and high prices, the people did not suffer from any severe distress, as evidenced by the absence of any marked increase of crime against property and by continued briskness of trade. The mill and factory hands in the larger towns would appear to be in even better condition than the agricultural population.

The average rainfall in each of the districts of
the Presidency Division during the past three years
is given below:—

		1891-92.	1890-91.	1889-90.
		Inches.	Inches.	Inches.
24-Parganas	..	45.59	66.00	60.23
Nadia	..	44.87	66.40	54.91
Khulna	..	47.52	67.66	53.66
Jessore	..	46.03	64.56	55.46
Murshidabad	..	39.92	61.27	48.72

The year 1891-92 was characterised by deficient and unevenly distributed rainfall. The rainfall in May and the beginning of June was heavy, but it was especially wanting during the months when it was most needed, and early in October it ceased entirely. The consequence on the whole was that, although the early rice generally yielded a good crop, the late rice and all cold-weather suffered great loss. Except in some parts of the 24-Parganas, Khulna, and Murshidabad, the crops were generally very deficient. The loss in Nadia was considerable.

The price of rice was higher in all the districts during the year as compared with the previous two years. The rates of wages, both for skilled and unskilled labour, remained stationary.

Generally speaking, the year was one of diminished prosperity to the agricultural classes. The loss inflicted upon them by the failure of their crops was aggravated by an outbreak of cattle-disease in some parts, and added largely to the difficulties of a situation already precarious by reason of two previous bad years. The labouring classes were also not well off, because while the rates of wages remained the same, they had to pay high prices for food. They, however, found ample work in the cotton and sugar mills and in the silk manufactories.

The following table shows the average rainfall in the districts of the Rajshahi Division for the past three years:—

Rajshahi Division.

		1891-92.	1890-91.	1889-90.
		Inches.	Inches.	Inches.
Dinajpur	...	40.37	98.96	62.47
Rajshahi	...	44.18	88.24	55.69
Pabna	...	42.69	66.28	61.67
Bogra	...	47.86	81.57	65.5
Rangpur	...	64.78	120.6	87.9
Jalpaiguri	...	75.29	171.74	124.48
Darjeeling	Hills ...	89.47	165.75	138.10
	Terai ...	69.63	189.88	123.88

It will be observed that 1891-92 was a year of drought, succeeding a year of floods. The distribution of rainfall was also unfavourable, for, while in May and the early monsoon season there was no want of moisture, the deficiency was most marked in the critical months of September and October. The rivers, moreover, as might have been anticipated, failed to rise, to their usual level. The effect of these conditions was that the early rice crops, the *boro* and *bhadoi*, were not so bad, but that the deficiency in the winter rice was serious, it being cut at the time when the rains failed. The loss was felt the most in parts of Dinajpur, where the winter rice is the only crop of any importance. Pulses yielded about the same return as in the previous year, and the variations in the other crops were not very marked.

Owing to the partial failure of the harvest, rice was exceptionally dear during the year; the increase, however, never exceeded 50 per cent. The rates of wages showed a fall since 1889-90 in Rajshahi, a tendency to rise in Pabna, and almost a stationary state in the other districts.

In the Division generally there was no want of employment for the labouring classes. The cultivators, who form the mass of the population, fared more unequally: some getting tolerable crops made large profits, prices being so high, particularly those who grew jute; the majority had a bad year, but were able to pay their rent, and support their families much as usual; while a considerable portion lost nearly their whole crop, and had to borrow, or exhaust resources previously accumulated.

The table below shows the average rainfall in the districts of the Dacca Division during the year as compared with the previous two years:—

Dacca Division.

		1891-92.	1890-91.	1888-89.
		Inches.	Inches.	Inches.
Dacca	..	64.96	72.23	83.06
Faridpur	..	48.55	58.00	62.4
Backergunge	..	61.21	77.97	79.78
Mymensingh	..	75.50	89.13	89.61

The year under report was one of indifferent harvests. The short rainfall and its uneven distribution affected all crops, especially the jute, which yielded only 9 annas for the whole Division. The *aman* suffered from want of rain in September and October, and the general outturn was below the average. There was no rain from December to February, and the result was a poor outturn of the winter crops.

Prices generally ruled higher in Dacca and Backergunge; in Faridpur there was no marked change; while in Mymensingh food-grains were actually cheaper than in 1890-91. The wages of both skilled and unskilled labour continued almost unchanged.

There was no marked change in the material condition of the people during the year. The high prices which generally prevailed fully compensated the peasant classes, which form the bulk of the population of this Division, for the short harvests they had reaped. Other classes, however, chiefly persons with small fixed incomes, suffered to some extent. The condition of the Garos and other hill people in Mymensingh is said to be improving.

The average rainfall in the districts of the Chittagong Division during the past three years has been as follows:

			1891-92.	1890-91.	1889-90
			Inches.	Inches.	Inches.
Chittagong	...	...	102.50	113.45	102.95
Noakhali	...	...	78.42	113.31	88.84
Tippera	...	...	72.74	73.22	69.31
Chittagong Hill Tracts	...	...	97.17	...	...

The year 1891-92 was marked by deficient and unevenly distributed rainfall; the rains having begun late, fallen heavily for a period, and ceased prematurely. The result was a comparatively poor crop in both the two staples, rice and jute, the divisional average outturn being only 11 annas and 9 annas, respectively, as against 15 and 12 annas in 1890-91, and 16 and 12 annas in 1889-90. The prices of food-grains also ruled high, but the labour market was stationary. The comparatively short crops and high prices do not seem to have affected the people as a whole injuriously, as the abnormally high prices of jute and rice, the latter of which, as well as the former, is a very large staple of export, more than compensated for the decreased outturn. In Tippera, the Collector reports, the people were as a rule averse to physical toil, and although the population is shown by the last census to be 802 to the square mile, a considerable portion of the agricultural work is done by labourers from Noakhali and other districts. "Educated muharrirs can be employed at a lower wage than menial servants. Field labourers can with difficulty be engaged at 5 or 6 annas a day, and may be seen at work carefully shaded by cloth umbrellas." At the close of the rainy season, numbers of labourers are said to come to Tippera from Bihâr, and even from Oudh, as road coolies and palki-bearers.

Figures showing the average rainfall in each of the districts of the Patna Division are given below:—

			1891-92.	1890-91.	1889-90
			Inches.	Inches.	Inches.
Patna	...	...	35.7	56.47	42.81
Gaya	...	...	28.16	54.81	30.21
Shahabad	...	...	26.31	52.26	43.07
Muzaffarpur	...	...	36.52	51.78	42.32
Darbhanga	...	...	36.48	62.77	52.12
Saran	...	...	31.55	58.67	37.58
Champan	...	...	41.18	73.66	64.94

The rainfall during 1891-92 was unevenly distributed and deficient in all districts. Excessive rain in March 1891 injured the *rabi* crops which were then ready for cutting. In May and June the rainfall was more normal and even, and the result was a good *bhadai* crop in nearly all districts; but the rains stopped prematurely in August and September, and the winter rice crop suffered severely in consequence, as also did the succeeding *rabi* crop, both by diminished area and by indifferent outturn. Poppy also suffered much from want of moisture for sowing, from an unseasonable rainfall in February 1892, and from blight. The bad crop outturns were closely followed by high prices, while wages remained practically stationary, so that the condition of the landless labourer class, and still more probably of the small fixed income class of petty non-cultivating land-owners, sank temporarily to a very unenviable level. It has been reported that the Shahabad district was only saved by the canal from a famine, and that in other parts of the Division also there would have been severe distress but for the fact that the people have learnt by experience to keep sufficient stocks of grain in hand until the subsequent crop has been harvested.

The following table compares the average rainfall of the year with that of the previous two years in each of the districts of the Bhágalpur Division:—

		1891-92.	1890-91.	1889-90.
		Inches.	Inches.	Inches.
Monghyr ...	...	38.69	62.88	44.83
Bhágalpur...	..	35.74	63.23	47.37
Purnea ...	..	44.05	99.62	80.61
Malda ...	..	41.26	73.63	41.21
Southal Parganas	..	47.04	72.40	54.71

The rainfall of 1891-92 was much less than that of the previous two years, and was unfavourably distributed. Owing to the early failure of the monsoon, and the almost entire absence of rain in the autumn and cold weather, the *bhadon* crops generally, and the winter rice and *rabi* crops, with small local exceptions, were much below the average. In addition to an unpropitious season, the cultivators had further to contend in several places with visitations of locusts, which made their appearance in June and July.

In consequence of the short harvests, prices ruled higher than usual, while wages had a tendency to decline, owing to the congested state of the labour market, except in the Southal Parganas, where emigration has an equalizing effect.

There can be no doubt that the strain which the events of the year have put upon the resources of the people had not been without its effect on their material condition, but there has been no permanent deterioration, and the Commissioner of the Division remarks that the manner in which the raiyats have been able to bear up in this hard time shows that there must be a considerable margin in good years, and that the food-stocks are much larger than is generally supposed.

Orissa Division.

The figures given below show the average rainfall in the three districts of the Orissa Division

for the past three years:—

		1891-92.	1890-91.	1888-90.
		Inches.	Inches.	Inches.
Cuttack ...	...	64.89	67.76	65.07
Puri ...	...	43.55	64.21	73.63
Balasore ...	...	60.67	69.98	52.81

The rainfall of 1891-92 was below the average and badly distributed, being deficient in the early months of the rainy season, and excessive in September. The result was a poor winter rice crop and consequent high prices, unaccompanied, however, by any rise in the rate of wages. One of the chief features of the year was the violent cyclone, which visited the Division in the month of October and devastated the littoral tracts, especially those of the Puri district. The area affected was not, however, large, and the inland tracts were much benefited by the heavy rain which accompanied the storm.

Though the cultivators benefited by the high prices of rice, other people suffered, and, as wages did not rise to a corresponding degree, the material condition of the landless classes was anything but prosperous. Plenty of employment was, however, available on irrigation and railway works, and this enabled the people to eke out their own resources.

Chota Nagpur Division.

The following table shows the average rainfall during the past three years in each of the districts of the Chota Nagpur Division:—

		1891-92.	1890-91.	1889-90.
		Inches.	Inches.	Inches.
Hazáribágh	...	41.64	54.64	44.42
Lohardaga	...	42.85	59.38	51.87
Palámanu	...	43.73	47.15	35.18
Singhbhum	...	57.67	53.36	56.66
Manbhanu	..	42.82	53.16	52.63

As in other Divisions, the conditions of rainfall in Chota Nagpur during 1891-92 were peculiar, the early rainfall in May being very heavy, while from

September onwards the rainy season may be said to have practically ceased altogether. The general result was a deficient outturn both of the *bhadoi* crops and of rice, but there was a compensation in an excellent crop of *māhua*, which in this Division forms an important article of food for the poorer classes, and a good outturn of sugarcane and opium in the districts where these crops are grown.

Prices of food-grains rose higher than in the preceding two years. Rates of wages remained practically unchanged, except in Singhbhum, where owing to the advent of the railway and the opening of mining and other industries, they show a general increase.

The year having been one of bad crops and high prices, there was no general improvement in the condition of the people. Except in Singhbhum and Manbhum, which are being developed under the influence of the new railway, and where the drought did less injury than elsewhere, the year was rather a hard one for agriculturists.

(N.B. — The rainfall figures for 1890-91 and 1889-90 do not agree with those in the last year's report, owing to the fact that in previous years the figures of the sadar and subdivisional stations only were taken, while in the present report the figures for all stations where a rain-gauge is kept have been taken.)

	18-19	5-20	9-96	19-98	28-99	41-90	46-98	7-90	3-94	49-90	60-78	4-19	7-11	53-99	51-93	0-95	1-90	53-84	53-73
Nadia	...	6-44	9-93	21-98	28-78	44-11	46-71	8-08	2-27	52-17	48-98	3-68	0-55	55-85	49-58	0-53	0-30	56-13	53-73
...	...	6-14	10-96	23-12	30-11	43-44	46-63	9-71	4-48	55-15	53-11	4-99	1-21	59-64	55-32	0-62	0-16	60-17	56-48
...	...	6-37	10-96	24-77	31-14	47-61	46-27	10-33	3-47	47-94	49-79	4-99	0-50	52-93	50-16	0-45	1-00	48-39	51-18
...	...	5-96	9-90	20-86	25-99	43-57	46-53	9-79	5-31	50-62	51-84	3-74	0-20	54-20	52-14	0-61	0-58	54-61	52-73
...	...	7-13	9-19	26-68	21-04	40-35	40-31	9-79	5-00	50-08	48-91	4-20	0-70	54-28	46-01	0-78	9-89	65-06	49-90
Kalna	...	6-82	9-81	25-60	21-74	50-36	45-11	8-58	6-67	50-08	48-91	4-20	0-70	54-28	46-01	0-78	9-89	65-06	49-90
...	...	7-18	9-48	28-81	27-29	55-52	52-21	10-01	5-23	53-53	57-44	4-25	0-54	70-76	58-28	0-92	9-44	71-70	60-72
...	...	9-18	19-55	28-27	32-59	52-00	53-32	8-74	6-09	60-74	59-41	4-38	0-10	65-12	60-51	0-58	1-33	65-70	60-84
...	...	7-00	10-33	26-00	23-89	44-09	41-99	7-31	4-75	52-00	46-34	3-67	0-02	65-62	46-96	0-64	9-13	66-26	48-49
Jessore	...	6-96	9-17	22-31	28-55	46-50	47-59	9-03	6-78	54-83	53-51	4-56	0-49	59-39	54-94	0-63	0-53	60-04	54-57
...	...	7-26	13-25	26-64	33-13	48-96	46-16	9-11	4-64	53-07	50-79	4-53	1-63	68-90	52-43	0-48	0-30	63-39	53-72
...	...	7-77	10-56	27-49	32-98	47-62	47-49	8-72	4-08	56-34	51-61	3-81	2-50	60-16	54-01	0-59	0-62	60-64	54-53
...	...	4-23	6-33	19-04	22-72	41-60	44-44	10-91	0-65	52-51	44-44	4-48	0-66	58-09	45-00	0-43	1-06	57-41	46-09
Murshidabad	...	3-65	4-98	16-72	23-75	39-30	37-97	10-08	9-41	49-98	47-26	4-62	0-84	54-51	49-12	0-61	0-76	56-02	40-48
...	...	2-95	5-41	16-67	27-03	39-24	41-32	10-78	7-07	50-02	48-29	3-30	2-71	53-32	51-10	0-21	1-41	53-66	52-53
...	...	9-85	8-65	17-94	24-06	41-47	35-83	9-57	3-85	51-04	42-71	3-93	2-05	54-97	44-76	0-59	1-20	55-66	45-96
Bangshan Division.	...	3-74	4-66	27-46	21-35	53-05	44-51	11-14	2-04	64-22	48-55	3-13	0-52	69-35	47-17	0-20	...	60-56	47-17
Dinajpur	7-83	...	30-86	42-23	45-10	...	2-37	...	48-73	...	1-88	...	70-06	...	...	...	70-06
Thakurgaon	8-27	18-61	23-48	42-23	45-10	11-27	2-37	53-50	47-47	4-44	2-07	67-94	49-54	0-26	0-31	68-19	49-26
Boalia	...	4-60	8-28	21-67	34-62	45-59	60-37	11-54	3-86	67-33	64-32	4-48	1-70	61-79	63-02	0-37	1-44	62-16	67-46
Nator	...	5-41	5-43	35-14	35-16	63-68	59-75	13-51	5-27	77-29	63-02	5-32	10-46	93-61	76-43	0-23	0-09	92-31	78-67
Rangpur	...	5-62	7-49	43-84	37-74	72-49	67-43	11-57	1-70	86-01	59-19	4-69	0-19	93-70	69-32	0-28	...	92-98	59-32
Nilphamari	...	7-46	7-46	29-93	30-23	72-40	65-14	11-57	3-74	84-87	58-58	6-12	3-64	93-49	62-62	0-28	0-46	89-77	62-86
Gaidanda	...	7-54	8-26	44-81	35-67	69-37	68-08	12-66	2-28	82-08	60-36	4-41	4-83	80-44	64-69	0-32	0-06	86-76	64-75
Kuriganj	...	4-33	9-20	26-97	27-64	62-67	43-41	10-75	3-21	63-62	49-62	3-98	1-00	67-60	47-62	0-40	0-60	68-00	61-32
Bogra	...	6-29	8-45	24-14	25-78	47-03	36-60	10-97	2-44	68-16	50-04	4-80	1-03	62-56	40-07	0-53	0-99	63-16	41-06
Pabna	...	5-52	9-06	24-19	31-64	46-92	48-58	9-97	4-18	66-26	52-72	4-88	3-62	60-64	56-24	0-40	1-06	61-16	57-30
Siriganj	...	7-72	6-53	40-30	37-01	95-82	86-99	17-66	5-74	113-48	92-13	8-66	0-88	120-44	93-01	0-40	0-01	120-84	93-02
Darjeeling	...	6-95	4-68	42-52	25-77	97-76	55-51	14-93	15-52	112-69	71-33	4-34	1-46	117-03	73-78	0-41	...	117-44	73-78
Siliguri	...	6-71	5-81	47-09	38-14	97-69	68-77	23-93	7-45	121-62	86-22	5-60	1-45	137-23	67-70	0-19	...	137-41	67-70
Malpukur	7-64	...	35-64	...	74-29	...	11-46	...	86-75	...	2-40	...	88-16	...	...	...	88-16
Alipur
Dacca Division.	...	9-10	10-33	31-42	42-63	57-22	63-20	9-97	5-35	67-10	63-56	3-96	0-16	71-14	68-73	0-68	1-96	71-83	70-69
Dacca	...	10-79	12-25	36-00	37-30	68-63	58-48	12-24	6-92	78-92	63-76	5-16	0-41	81-38	63-17	1-17	3-70	85-56	66-87
Munshiganj	...	7-61	13-60	26-30	39-39	49-63	53-47	6-13	8-71	67-78	57-18	3-96	0-94	61-71	68-12	0-59	0-82	62-30	58-94
Manikganj	...	9-39	12-19	31-56	41-47	60-70	66-45	10-35	7-51	71-05	73-56	4-45	1-46	75-60	75-32	1-67	3-84	77-07	78-66
Narayanganj	...	8-42	12-06	29-81	31-33	54-23	51-21	10-94	4-69	64-27	56-50	4-30	1-82	68-67	57-62	0-54	1-07	69-11	68-69
Faridpur	...	7-48	10-65	27-37	31-33	50-61	41-78	9-61	2-91	59-22	44-51	4-83	0-50	64-05	45-14	0-47	0-30	64-52	46-64
Gouldondo	...	8-09	11-61	30-57	25-78	51-90	47-76	8-50	6-49	63-30	64-26	4-18	0-56	67-48	54-31	0-58	4-11	68-96	58-92
Madaripur	...	7-73	10-34	32-20	24-31	60-40	51-98	11-68	11-24	72-08	63-22	4-58	0-75	77-06	61-97	1-67	3-10	78-93	68-07
Barisal	...	6-77	7-78	23-76	28-31	67-69	57-99	11-38	9-20	71-91	67-10	4-78	0-49	77-69	67-59	1-50	1-69	79-18	69-28
Pirojpur	...	6-77	12-78	37-41	33-84	75-94	66-91	13-36	10-94	89-30	76-83	6-99	1-48	96-29	78-96	2-13	0-72	97-42	78-08
Patuakhali	...	7-47	11-66	30-20	31-00	73-05	66-57	12-12	7-17	85-17	62-54	6-49	0-56	90-66	63-19	2-07	0-38	93-73	63-67
Bhola	...	7-62	10-16	37-65	42-75	66-76	65-70	14-19	4-50	79-96	63-90	5-69	3-49	85-64	73-39	0-46	2-38	86-12	76-77
Mymensingh	...	6-22	8-77	30-06	34-24	55-92	63-97	14-06	3-35	73-96	67-32	6-03	2-39	76-01	69-51	0-51	1-90	75-62	71-61
Jamshilpur	...	6-57	9-79	26-77	38-82	46-98	47-11	9-29	3-63	67-68	50-64	4-97	0-41	64-65	61-05	0-33	0-63	66-00	61-68
Kishoreganj	...	9-43	10-59	38-69	60-71	64-95	89-81	13-11	6-21	78-06	96-02	5-30	3-49	83-86	99-51	0-73	1-67	84-09	101-18
Netrokona	...	7-30	11-78	40-64	61-42	74-47	80-96	14-04	6-00	88-51	96-96	6-06	3-76	94-57	100-72	0-54	1-71	98-11	102-43

Statement showing seasonal rainfall for each subdivision in Bengal for the year 1891—concluded.

REGISTERED RAINFALL IN INCHES.																								
Names of divisions and districts.	Names of sub-divisions.	Number of years the total rainfall was not taken for the average fall per annum.	Fall in 1891.																Average of years as per column 5.		Total fall of the year.			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		19	20	21
			Fall to end of April (four months).	Fall to end of June (six months).	Fall to end of August (eight months).	Fall to end of September (nine months).	Fall in October (one month).	Fall to end of September (nine months).	Average of years as per column 5.	Fall in 1891.	Fall to end of September (nine months).	Average of years as per column 5.	Fall in October (one month).	Fall to end of October (ten months).	Average of years as per column 5.	Fall in 1891.	Fall to end of October (ten months).	Average of years as per column 5.	Fall in 1891.	Fall to end of October (ten months).	Average of years as per column 5.	Fall in 1891.	Fall to end of October (ten months).	Average of years as per column 5.
CHITTAGONG DIVISION.																								
Chittagong	Chittagong	18-19	7.22	10.33	41.79	29.95	53.53	75.40	13.22	4.34	97.05	81.90	6.60	1.93	102.65	53.23	1.74	9.29	101.94	84.96	1.74	9.29	101.94	84.96
	Cox's Bazar	17-18	5.61	4.18	50.24	52.07	17.05	46.89	15.11	8.63	132.68	105.51	7.73	3.52	140.38	102.03	1.23	3.06	143.44	110.28	1.23	3.06	143.44	110.28
Noakhali	Noakhali	18-19	9.31	10.90	45.50	40.00	94.60	72.24	17.84	7.54	112.30	79.74	8.84	3.14	110.18	82.83	0.90	2.41	121.57	83.78	0.90	2.41	121.57	83.78
	Fenny	11-12	1.83	1.01	50.38	40.76	58.95	76.13	15.71	3.90	112.66	80.02	0.85	2.45	118.34	82.47	1.44	4.13	122.67	83.91	1.44	4.13	122.67	83.91
Tippera	Comilla	15-16	10.61	18.53	39.93	31.98	74.82	73.53	11.40	4.76	81.29	61.29	4.23	2.32	90.26	83.61	4.64	1.38	91.63	87.16	4.64	1.38	91.63	87.16
	Brahmanbaria	17-18	11.94	13.41	38.21	45.32	61.85	58.23	11.90	2.56	70.54	71.09	4.70	3.15	78.30	73.24	8.19	0.85	79.15	77.45	8.19	0.85	79.15	77.45
Chittagong Hill Tracts.	Chandpur	11	8.99	9.46	94.36	82.87	70.12	56.33	11.92	8.00	91.94	84.33	6.14	...	86.18	64.39	4.95	0.96	89.03	89.78	4.95	0.96	89.03	89.78
	Rangamati	18-19	8.27	6.69	37.31	31.92	14.79	68.11	12.72	5.31	87.61	73.42	7.01	2.92	94.52	73.44	2.16	2.51	97.09	77.60	2.16	2.51	97.09	77.60
BHAR.																								
PATNA DIVISION.																								
Patna	Patna	18-19	1.59	3.19	10.61	17.79	32.32	39.79	7.09	3.4	99.91	34.24	3.93	1.72	43.24	36.86	Nil	0.32	43.56	36.98	Nil	0.32	43.56	36.98
	Bihar	18-19	1.75	4.60	10.13	13.01	33.63	36.77	6.69	4.41	40.16	41.16	3.92	1.16	43.98	42.34	Nil	0.36	43.78	42.24	Nil	0.36	43.78	42.24
	Barh	18	1.36	3.70	5.70	17.48	30.30	40.83	7.70	3.40	38.04	42.73	3.18	0.50	41.18	44.23	Nil	0.36	41.54	44.29	Nil	0.36	41.54	44.29
	Dinapore	18-19	1.27	7.47	9.48	23.76	32.20	38.63	6.84	8.20	59.04	44.23	3.26	0.40	42.50	44.69	Nil	0.33	42.63	44.08	Nil	0.33	42.63	44.08
	Gaya	18-19	1.77	4.63	9.37	11.27	33.83	30.83	7.32	4.24	41.17	35.12	2.96	0.40	43.63	36.93	Nil	0.52	44.06	36.93	Nil	0.52	44.06	36.93
	Nawadsh	17-18	1.93	4.25	9.40	14.70	31.64	37.81	6.97	4.20	58.81	42.01	2.97	0.40	41.48	42.41	Nil	0.42	41.90	43.41	Nil	0.42	41.90	43.41
	Aurangabad	17-18	1.64	4.68	9.04	8.81	33.65	26.37	7.21	2.65	40.87	28.62	2.76	0.36	43.63	28.88	Nil	0.60	44.22	28.88	Nil	0.60	44.22	28.88
	Jehanabad	16-17	1.61	4.10	8.11	10.08	32.38	27.17	5.66	1.80	38.54	29.07	3.65	1.99	42.09	31.01	Nil	0.44	42.63	31.01	Nil	0.44	42.63	31.01
	Azmir	16-19	1.52	3.71	8.47	14.32	31.43	25.38	6.67	6.40	38.30	31.78	3.29	1.21	41.68	32.99	Nil	0.36	41.94	32.99	Nil	0.36	41.94	32.99
	Sasaram	18-19	1.40	2.42	7.74	8.19	30.95	20.96	6.94	4.27	37.89	26.15	3.08	0.77	41.67	26.90	Nil	0.50	43.07	26.90	Nil	0.50	43.07	26.90
	Buxar	18-19	1.00	2.94	7.69	5.46	28.83	16.05	7.19	6.05	96.07	21.10	3.26	1.20	39.42	22.30	Nil	0.40	39.83	22.30	Nil	0.40	39.83	22.30
	Shahabad	18-19	1.88	3.09	8.26	4.68	32.30	20.75	6.67	6.54	36.07	32.29	3.48	0.36	43.26	32.75	Nil	0.86	43.10	32.75	Nil	0.86	43.10	32.75
	Muzaffarpur	18-19	2.20	8.64	12.45	12.49	34.60	31.89	9.67	0.90	44.57	32.79	3.47	0.38	48.04	33.02	Nil	0.23	48.26	33.02	Nil	0.23	48.26	33.02
	Hajipur	17	1.68	6.81	10.36	16.04	32.36	20.68	7.23	3.55	59.69	34.23	3.68	0.69	43.57	34.83	Nil	0.26	43.83	34.83	Nil	0.26	43.83	34.83
	Sitamarhi	17-18	2.68	4.03	13.36	26.62	93.69	45.33	9.76	2.12	49.46	60.66	2.74	2.44	46.19	53.09	Nil	0.13	46.32	53.09	Nil	0.13	46.32	53.09

		17-18	18-19	19-00	20-01	21-02	22-03	23-04	24-05	25-06	26-07	27-08	28-09	29-10	30-11	31-12	1-13	2-14	3-15	4-16	5-17	6-18	7-19	8-20	9-21	10-22	11-23	12-24	13-25	14-26	15-27	16-28	17-29	18-30	19-31	20-32	21-33	22-34	23-35	24-36	25-37	26-38	27-39	28-40	29-41	30-42	31-43	1-44	2-45	3-46	4-47	5-48	6-49	7-50	8-51	9-52	10-53	11-54	12-55	13-56	14-57	15-58	16-59	17-60	18-61	19-62	20-63	21-64	22-65	23-66	24-67	25-68	26-69	27-70	28-71	29-72	30-73	31-74	1-75	2-76	3-77	4-78	5-79	6-80	7-81	8-82	9-83	10-84	11-85	12-86	13-87	14-88	15-89	16-90	17-91	18-92	19-93	20-94	21-95	22-96	23-97	24-98	25-99	26-00	27-01	28-02	29-03	30-04	31-05	1-06	2-07	3-08	4-09	5-10	6-11	7-12	8-13	9-14	10-15	11-16	12-17	13-18	14-19	15-20	16-21	17-22	18-23	19-24	20-25	21-26	22-27	23-28	24-29	25-30	26-31	27-32	28-33	29-34	30-35	31-36	1-37	2-38	3-39	4-40	5-41	6-42	7-43	8-44	9-45	10-46	11-47	12-48	13-49	14-50	15-51	16-52	17-53	18-54	19-55	20-56	21-57	22-58	23-59	24-60	25-61	26-62	27-63	28-64	29-65	30-66	31-67	1-68	2-69	3-70	4-71	5-72	6-73	7-74	8-75	9-76	10-77	11-78	12-79	13-80	14-81	15-82	16-83	17-84	18-85	19-86	20-87	21-88	22-89	23-90	24-91	25-92	26-93	27-94	28-95	29-96	30-97	31-98	1-99	2-00	3-01	4-02	5-03	6-04	7-05	8-06	9-07	10-08	11-09	12-10	13-11	14-12	15-13	16-14	17-15	18-16	19-17	20-18	21-19	22-20	23-21	24-22	25-23	26-24	27-25	28-26	29-27	30-28	31-29	1-30	2-31	3-32	4-33	5-34	6-35	7-36	8-37	9-38	10-39	11-40	12-41	13-42	14-43	15-44	16-45	17-46	18-47	19-48	20-49	21-50	22-51	23-52	24-53	25-54	26-55	27-56	28-57	29-58	30-59	31-60	1-61	2-62	3-63	4-64	5-65	6-66	7-67	8-68	9-69	10-70	11-71	12-72	13-73	14-74	15-75	16-76	17-77	18-78	19-79	20-80	21-81	22-82	23-83	24-84	25-85	26-86	27-87	28-88	29-89	30-90	31-91	1-92	2-93	3-94	4-95	5-96	6-97	7-98	8-99	9-00	10-01	11-02	12-03	13-04	14-05	15-06	16-07	17-08	18-09	19-10	20-11	21-12	22-13	23-14	24-15	25-16	26-17	27-18	28-19	29-20	30-21	31-22	1-23	2-24	3-25	4-26	5-27	6-28	7-29	8-30	9-31	10-32	11-33	12-34	13-35	14-36	15-37	16-38	17-39	18-40	19-41	20-42	21-43	22-44	23-45	24-46	25-47	26-48	27-49	28-50	29-51	30-52	31-53	1-54	2-55	3-56	4-57	5-58	6-59	7-60	8-61	9-62	10-63	11-64	12-65	13-66	14-67	15-68	16-69	17-70	18-71	19-72	20-73	21-74	22-75	23-76	24-77	25-78	26-79	27-80	28-81	29-82	30-83	31-84	1-85	2-86	3-87	4-88	5-89	6-90	7-91	8-92	9-93	10-94	11-95	12-96	13-97	14-98	15-99	16-00	17-01	18-02	19-03	20-04	21-05	22-06	23-07	24-08	25-09	26-10	27-11	28-12	29-13	30-14	31-15	1-16	2-17	3-18	4-19	5-20	6-21	7-22	8-23	9-24	10-25	11-26	12-27	13-28	14-29	15-30	16-31	17-32	18-33	19-34	20-35	21-36	22-37	23-38	24-39	25-40	26-41	27-42	28-43	29-44	30-45	31-46	1-47	2-48	3-49	4-50	5-51	6-52	7-53	8-54	9-55	10-56	11-57	12-58	13-59	14-60	15-61	16-62	17-63	18-64	19-65	20-66	21-67	22-68	23-69	24-70	25-71	26-72	27-73	28-74	29-75	30-76	31-77	1-78	2-79	3-80	4-81	5-82	6-83	7-84	8-85	9-86	10-87	11-88	12-89	13-90	14-91	15-92	16-93	17-94	18-95	19-96	20-97	21-98	22-99	23-00	24-01	25-02	26-03	27-04	28-05	29-06	30-07	31-08	1-09	2-10	3-11	4-12	5-13	6-14	7-15	8-16	9-17	10-18	11-19	12-20	13-21	14-22	15-23	16-24	17-25	18-26	19-27	20-28	21-29	22-30	23-31	24-32	25-33	26-34	27-35	28-36	29-37	30-38	31-39	1-40	2-41	3-42	4-43	5-44	6-45	7-46	8-47	9-48	10-49	11-50	12-51	13-52	14-53	15-54	16-55	17-56	18-57	19-58	20-59	21-60	22-61	23-62	24-63	25-64	26-65	27-66	28-67	29-68	30-69	31-70	1-71	2-72	3-73	4-74	5-75	6-76	7-77	8-78	9-79	10-80	11-81	12-82	13-83	14-84	15-85	16-86	17-87	18-88	19-89	20-90	21-91	22-92	23-93	24-94	25-95	26-96	27-97	28-98	29-99	30-00	31-01	1-02	2-03	3-04	4-05	5-06	6-07	7-08	8-09	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31	31-32	1-33	2-34	3-35	4-36	5-37	6-38	7-39	8-40	9-41	10-42	11-43	12-44	13-45	14-46	15-47	16-48	17-49	18-50	19-51	20-52	21-53	22-54	23-55	24-56	25-57	26-58	27-59	28-60	29-61	30-62	31-63	1-64	2-65	3-66	4-67	5-68	6-69	7-70	8-71	9-72	10-73	11-74	12-75	13-76	14-77	15-78	16-79	17-80	18-81	19-82	20-83	21-84	22-85	23-86	24-87	25-88	26-89	27-90	28-91	29-92	30-93	31-94	1-95	2-96	3-97	4-98	5-99	6-00	7-01	8-02	9-03	10-04	11-05	12-06	13-07	14-08	15-09	16-10	17-11	18-12	19-13	20-14	21-15	22-16	23-17	24-18	25-19	26-20	27-21	28-22	29-23	30-24	31-25	1-26	2-27	3-28	4-29	5-30	6-31	7-32	8-33	9-34	10-35	11-36	12-37	13-38	14-39	15-40	16-41	17-42	18-43	19-44	20-45	21-46	22-47	23-48	24-49	25-50	26-51	27-52	28-53	29-54	30-55	31-56	1-57	2-58	3-59	4-60	5-61	6-62	7-63	8-64	9-65	10-66	11-67	12-68	13-69	14-70	15-71	16-72	17-73	18-74	19-75	20-76	21-77	22-78	23-79	24-80	25-81	26-82	27-83	28-84	29-85	30-86	31-87	1-88	2-89	3-90	4-91	5-92	6-93	7-94	8-95	9-96	10-97	11-98	12-99	13-00	14-01	15-02	16-03	17-04	18-05	19-06	20-07	21-08	22-09	23-10	24-11	25-12	26-13	27-14	28-15	29-16	30-17	31-18	1-19	2-20	3-21	4-22	5-23	6-24	7-25	8-26	9-27	10-28	11-29	12-30	13-31	14-32	15-33	16-34	17-35	18-36	19-37	20-38	21-39	22-40	23-41	24-42	25-43	26-44	27-45	28-46	29-47	30-48	31-49	1-50	2-51	3-52	4-53	5-54	6-55	7-56	8-57	9-58	10-59	11-60	12-61	13-62	14-63	15-64	16-65	17-66	18-67	19-68	20-69	21-70	22-71	23-72	24-73	25-74	26-75	27-76	28-77	29-78	30-79	31-80	1-81	2-82	3-83	4-84	5-85	6-86	7-87	8-88	9-89	10-90	11-91	12-92	13-93	14-94	15-95	16-96	17-97	18-98	19-99	20-00	21-01	22-02	23-03	24-04	25-05	26-06	27-07	28-08	29-09	30-10	31-11	1-12	2-13	3-14	4-15	5-16	6-17	7-18	8-19	9-20	10-21	11-22	12-23	13-24	14-25	15-26	16-27	17-28	18-29	19-30	20-31	21-32	22-33	23-34	24-35	25-36	26-37	27-38	28-39	29-40	30-41	31-42	1-43	2-44	3-45	4-46	5-47	6-48	7-49	8-50	9-51	10-52	11-53	12-54	13-55	14-56	15-57	16-58	17-59	18-60	19-61	20-62	21-63	22-64	23-65	24-66	25-67	26-68	27-69	28-70	29-71	30-72	31-73	1-74	2-75	3-76	4-77	5-78	6-79	7-80	8-81	9-82	10-83	11-84	12-85	13-86	14-87	15-88	16-89	17-90	18-91	19-92	20-93	21-94	22-95	23-96	24-97	25-98	26-99	27-00	28-01	29-02	30-03	31-04	1-05	2-06	3-07	4-08	5-09	6-10	7-11	8-12	9-13	10-14	11-15	12-16	13-17	14-18	15-19	16-20	17-21	18-22	19-23	20-24	21-25	22-26	23-27	24-28	25-29	26-30	27-31	28-32	29-33	30-34	31-35	1-36	2-37	3-38	4-39	5-40	6-41	7-42	8-43	9-44	10-45	11-46	12-47	13-48	14-49	15-50	16-51	17-52	18-53	19-54	20-55	21-56	22-57	23-58	24-59	25-60	26-61	27-62	28-63	29-64	30-65	31-66	1-67	2-68	3-69	4-70	5-71	6-72	7-73	8-74	9-75	10-76	11-77	12-78	13-79	14-80	15-81	16-82	17-83	18-84	19-85	20-86	21-87	22-88	23-89	24-90	25-91	26-92	27-93	28-94	29-95	30-96	31-97	1-98	2-99	3-00	4-01	5-02	6-03	7-04	8-05	9-06	10-07	11-08	12-09	13-10	14-11	15-12	16-13	17-14	18-15	19-16	20-17	21-18	22-19	23-20	24-21	25-22	26-23	27-24	28-25	29-26	30-27	31-28	1-29	2-30	3-31	4-32	5-33	6-34	7-35	8-36	9-37	10-38	11-39	12-40	13-41	14-42	15-43	16-44	17-45	18-46	19-47	20-48	21-49	22-50	23-51	24-52	25-53	26-54	27-55	28-56	29-57	30-58	31-59	1-60	2-61	3-62	4-63	5-64	6-65	7-66	8-67	9-68	10-69	11-70	12-71	13-72	14-73	15-74	16-75	17-76	18-77	19-78	20-79	21-80	22-81	23-82	24-83	25-84	26-85	27-86	28-87	29-88	30-89	31-90	1-91	2-92	3-93	4-94	5-95	6-96	7-97	8-98	9-99	10-00	11-01	12-02	13-03	14-04	15-05	16-06	17-07	18-08	19-09	20-10	21-11	22-12	23-13	24-14	25-15	26-16	27-17	28-18	29-19	30-20	31-21	1-22	2-23	3-24	4-25	5-26	6-27	7-28	8-29	9-30	10-31	11-32	12-33	13-34	14-35	15-36	16-37	17-38	18-39	19-40	20-41	21-42	22-43	23-44	24-45	25-46	26-47	27-48	28-49	29-50	30-51	31-52	1-53	2-54	3-55	4-56	5-57
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Statement showing Monthly Variations in the Retail Prices of Food-grains and Salt in selected districts of Bengal from April 1891 to March 1892.

DISTRICTS.	NUMBER OF SEERS OF 80 TOLAHS WEIGHT PURCHASEABLE FOR A RUPEE.											
	COMMON RICE.											
	1891.									1892.		
	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.
Calcutta	S. c. 13 12½	S. c. 13 9½	S. c. 13 10½	S. c. 13 4	S. c. 13 0	S. c. 12 10	S. c. 12 7	S. c. 12 8½	S. c. 12 10	S. c. 12 7½	S. c. 11 11½	S. c. 11 8
Burdwan	16 15½	17 2½	16 15½	16 3	16 13½	15 12	15 6	16 4	14 13	14 2½	13 14	13 11
24-Parganas	16 4	16 12	15 8	15 4	14 8	14 8	15 4	15 0	13 8	13 8	13 4	13 0
Dinajpur	18 0	17 6	16 12	15 4	18 10	13 12	12 0	12 0	12 13½	12 0	12 9½	11 8
Backergunge	16 6	16 13	16 12½	15 9	15 6	16 0	16 8	14 12	14 4	14 0	12 12	12 8
Chittagong	16 11	17 2	16 7½	16 0	16 12	16 12	16 0	16 0	13 0	13 0	13 0	11 15
Patna	15 5	17 12	17 8	16 12	17 4	18 0	18 8	17 8	17 12	14 12	14 0	14 0
Darbhanga	14 8	15 0	14 10½	14 13	14 0	11 4	14 4	13 0	13 7½	13 9½	12 8½	12 1
Muzaffarpur	15 8	14 8	13 8	14 0	13 8	14 0	13 8	12 0	13 0	12 8	12 0	12 0
									Old. 12 5	Old. 11 0½	Old. 10 10½	Old. 10 1
Bhāgalpur	16 2	14 13	15 2	15 2	14 8	15 2	14 13	13 4	New. 13 9	New. 12 5	New. 12 10	New. 11 6
Purnea	18 0	18 0	18 0	18 0	17 0	14 8	13 0	11 0	11 8	11 0	11 0	11 0
Puri	21 0	21 0	21 0	21 0	17 1	19 11	17 1	15 12	15 12	14 10	13 16½	13 15
Hazāribāgh	15 0	16 0	14 12	14 0	13 12	14 8	14 10	15 4	14 0	13 8	13 2	13 12

WHEAT.

	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.
Calcutta	12 3	12 7½	12 9½	12 5½	12 3½	11 5½	11 3½	10 13½	11 2½	10 14	11 8	11 3½	11 3½
Burdwan	11 11½	12 14	13 4	13 4	12 8	11 10½	11 8	11 6	10 8½	12 0	11 8	11 8	11 8
24-Parganas	12 6	13 0½	13 5	13 5	12 10½	12 4	12 0	10 12	10 9	10 4	10 4	10 14	10 14
Dinajpur	12 6	13 5½	12 12	16 0	15 9	12 9½	11 1½	11 5	12 0	10 11½	10 13	11 6½	11 6½
Backergunge	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittagong	12 0	12 8	12 0	12 0	12 0	12 0	10 0	10 0	9 12	9 12	10 0	9 4	9 4
Patna { Red	15 7	17 0	18 0	18 0	17 8	16 4	16 14	15 10	16 0	14 12	13 12	15 0	15 0
Patna { White	14 6½	16 4	16 8	16 8	15 4	16 0	14 14	13 8	14 8	13 0	12 12	13 8	13 8
Darbhanga	14 0	16 8	14 11	13 9	15 15	14 5½	14 11	13 10	13 11½	13 11½	12 10	12 10	12 10
Muzaffarpur	16 0	16 8	16 0	16 0	15 0	14 0	13 8	13 8	12 0	12 0	12 0	12 0	12 0
Bhāgalpur	16 7	16 8	16 11	16 6	15 12	14 13	13 14	13 14	13 9	12 10	12 10	12 16	12 16
Purnea	15 0	16 0	18 0	18 0	18 0	16 0	12 0	11 0	11 0	11 0	11 0	11 0	11 0
Puri	14 7	14 7	14 7	11 13	11 13	11 13	9 7	9 7	8 5	8 7	8 8	9 13½	9 13½
Hazāribāgh	13 8	13 0	13 12	13 8	13 0	13 4	13 12	12 8	11 8	11 12	11 12	12 0	12 0

BARLEY.

	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.
Calcutta	19 3½	19 9	20 0½	19 9½	19 0½	20 0½	19 4½	18 2½	17 15	19 2½	17 8	16 9	16 9
Burdwan	23 10	...	...	...	35 0	...	...	...	...	...	...	19 0	19 0
24-Parganas	20 0	20 4	20 8	20 0	20 0	20 0	20 0	20 0	20 0	18 0	17 0	18 0	18 0
Dinajpur	16 8	17 0	16 0	16 4	18 8	23 0	18 12	17 0	17 8	17 0	17 12	18 0	18 0
Backergunge	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittagong	...	...	...	...	...	...	...	...	...	...	...	...	...
Patna	21 0½	23 4	23 8	23 8	23 0	24 8	25 0	25 0	26 8	26 0	24 8	23 0	23 0
Darbhanga	22 0	26 0	23 1½	24 10	24 3	23 1½	19 2	23 0	23 0	22 0	21 7	19 12	19 12
Muzaffarpur	22 12	21 0	23 0	20 8	21 8	24 8	21 8	21 8	24 8	21 0	22 4	23 0	23 0
Bhāgalpur	25 4	25 4	25 4	23 5½	24 0	23 15½	22 1	22 1	23 5½	23 11	20 3	18 9	18 9
Purnea	17 0	17 0	17 0	14 0	16 0	16 0	13 0	14 0	13 0	22 8	17 0	13 0	13 0
Puri	...	...	...	...	...	...	...	...	...	...	...	...	...
Hazāribāgh	16 0	16 0	16 0	16 8	17 0	16 8	16 8	16 8	17 0	16 8	14 0	13 0	13 0

Statement showing Monthly Variations in the Retail Prices of Food-grains and Salt in selected districts of Bengal from April 1891 to March 1892—concluded.

Districts.	NUMBER OF SEERS OF 80 TOLAHS WEIGHT PURCHASEABLE FOR A RUPEE.											
	MAIZE OR INDIAN-CORN.											
	1891.									1892.		
	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.
	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.
Calcutta	...	...	...	...	14 8	17 6	18 10	18 11	17 4	16 15½	16 0½	16 0
Burdwan	...	...	...	...	...	...	...	...	...	...	...	...
24-Parganas	...	...	...	...	...	...	...	...	...	...	...	...
Dinajpur	...	...	...	...	...	...	...	...	...	...	...	...
Backergrunge	...	...	...	...	...	...	...	...	...	...	...	...
Chittagong	...	...	...	...	...	...	...	...	...	...	...	...
Patna	19 0	...	...	...	25 0	24 8	24 8	24 4	24 8	22 0	21 8	21 12
Darbhanga	18 0	18 0	17 12½	18 4	20 14	23 2	20 8	20 8	21 8	20 14	20 0	19 6
Muzaffarpur	16 8	15 8	16 0	16 8	17 0	23 0	23 8	21 0	21 8	20 8	20 0	20 8
Bhagalpur	20 8	20 8	28 15½	30 8	24 10	23 13	23 5½	20 13	20 13	18 15	17 13½	17 0
Purnea	20 0	...	20 0	...	...	...	20 0	16 0	17 8	17 0	16 8	16 0
Puri	...	...	...	...	...	...	...	...	...	...	...	...
Hazáribágh	20 0	17 8	17 0	17 12	17 4	18 0	24 0	24 0	19 0	19 0	18 0	18 0

GRAM.

	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.
Calcutta	16 11	17 1	17 11	18 3	17 0	15 11	15 12	16 6	15 12	15 10	15 4	15 6
Burdwan	19 9	19 0	19 8	20 0	20 0	20 9	19 0	18 12½	17 10½	19 14	17 0	17 0
24-Parganas	19 0	20 0	20 0	20 8	19 12	19 12	20 0	18 8	18 0	18 0	16 4	16 0
Dinajpur	15 4	17 8	18 0	19 4	21 0	19 4	16 8	14 8	16 0	13 3½	12 12	14 9
Backergrunge	12 12	13 14½	15 15½	16 0	15 4	14 8	14 8	14 12	14 4	13 2½	12 5	12 13
Chittagong	11 0	11 8	13 0	13 0	13 0	12 0	11 0	12 0	12 0	10 0	11 0	11 0
Patna	21 4	22 8	22 4	22 0	22 4	22 12	22 8	22 0	22 8	21 8	21 0	21 8
Darbhanga	20 0	20 0	19 14	20 8	21 2	19 13½	17 8	19 2	19 12½	19 9½	18 10½	18 2
Muzaffarpur	17 12	18 4	19 0	19 0	19 0	20 0	18 8	18 8	19 0	17 8	19 8	18 0
Bhagalpur	20 13	21 7	22 11	22 1	21 7	21 7	21 7	20 3	20 3	20 3	18 13	18 15
Purnea	17 8	20 0	21 0	20 0	20 0	18 0	16 0	13 8	15 0	18 0	16 0	16 0
Puri*	15 12	13 2	13 2	14 7	14 7	13 2	12 1	11 0	12 2	12 3	13 3½	14 3
Hazáribágh	16 0	16 4	16 0	16 0	16 0	15 6	16 0	16 8	17 0	16 8	16 0	16 8

SALT.

	S. a.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.
Calcutta	10 11	10 13	11 0	10 16	11 0	11 1	11 3	11 2	11 2	11 6½	11 0	11 1½
Burdwan	10 10	11 8	11 2½	11 3½	11 4	11 4	11 4	11 4	11 4	11 4	11 4	11 5½
24-Parganas	10 12	10 12	10 12	10 12	10 12	10 12	10 14	11 0	11 0	11 0	11 0	11 0
Dinajpur	10 0	10 0	10 2	10 0	10 4	10 8	10 4	10 4	10 8	10 2	10 4	10 4
Backergrunge	10 7½	10 10	10 10	10 10	10 5	10 0	10 4	10 0	10 4	10 8	10 0	10 0
Chittagong	10 0	10 0	10 0	10 8	11 0	10 8	10 0	10 8	10 8	11 0	11 0	10 8
Patna	10 14	10 13	10 14	11 0	11 12	11 8	11 8	11 8	11 10	11 8	11 8	11 8
Darbhanga	11 0	11 0	11 2	11 0½	11 0	11 0	11 0	11 0	11 0	11 0	11 0	11 0
Muzaffarpur	11 3	10 8	11 2	11 0	11 0	11 0	11 0	11 0	11 0	11 0	11 0	11 0
Bhagalpur	10 1	10 5	10 3½	10 11	10 11	10 11	10 11	10 11	10 11	10 11	10 11	10 11
Purnea	9 4	9 4	9 0	9 0	9 8	10 0	10 0	10 0	10 0	10 0	10 0	10 0
Puri	9 13	9 13	9 13	10 13	11 73	11 13	11 13	11 13	11 13	11 13	11 13	11 14
Hazáribágh	9 0	9 0	7 8	8 8	8 12	9 0	9 0	9 8	10 0	10 0	10 0	9 0½

* In Puri the rates given are those for koles.

Famine Relief Administration.

THE rainfall of 1891, which was deficient in the greater part of Bengal, ceased almost entirely in September to the detriment of the great winter rice crop of the Province. The *rabi* crop also suffered in places owing to a want of sufficient moisture. The short rainfall was chiefly confined to the last two months of the ordinary monsoon period, and the *bhadoi* crop was not therefore much affected. Apprehensions were felt with regard to the districts of Gaya, Muzaffarpur, and Darbhanga, and a portion of Shahabad in the Patna Division, Dinajpur and Bogra in the Rajshahi Division, and Bhagalpur, Purnea, and Monghyr in the Bhagalpur Division. To this list Champaran, which had suffered severely in 1873-74 as well as in 1888-89, was subsequently added. Steps were taken to impress upon the District Boards, as an integral part of the administration, that in times of scarcity or famine they were required to do more than merely provide funds for relief works under Chapter XI of the Bengal Famine Code; that it was incumbent on them to recast their budgets; and that after providing for all obligatory expenditure, such as establishment, maintenance of works and buildings, and completion of works in progress which would suffer seriously from being stopped and entail great loss in the end, all the rest of their expenditure on public works should be devoted to such as could be classed as relief works.

No serious distress requiring the intervention of Government, however, made its appearance in the districts of Gaya, Shahabad, Bogra, and Champaran.

In Bogra test works were opened, but did not prove attractive to labourers, and were consequently soon after closed. In Gaya also test works proved a failure, but relief was being effected by advances. Up to the 31st March 1892 Rs. 35,000 were granted under the Land Improvement Loans Act and Rs. 12,000 under the Agriculturists Loans Act.

The average rainfall of the Muzaffarpur district during the year 1891-92 was 36.52 inches, against 51.78 inches in 1890-91.

Muzaffarpur.

The rice and *rabi* crops reaped throughout the district during 1891-92 were poor. In the head-quarters subdivision rice was estimated to be a 6-anna crop, in Sitamarhi it was a 7-anna crop, while in Hajipur only a 3-anna crop was obtained. A very poor *rabi* crop, varying from 2 to 8 annas, followed this.

Distress was most acute in Lalganj, Belsund, and Shiuhar thanas. There was considerable distress in a tract to the west of Muzaffarpur between Paru, Sahibganj, and Bhamraj, in parts of Katra and Muzaffarpur thanas. In March 1892 the affected area was 184 square miles, with a population of 146,840 souls. Relief works were opened in the first week of that month on three roads near Katra, Paru, and Lalganj. In the following week work began on the Sesoula road in Shiuhar thana. By the end of March 1892, 13 works (10 roads and 3 tanks) were open near the above-named thanas, as well as near Muzaffarpur and Belsund. During the week ending 5th March 1892 the average number of A and B male units employed on the works was 150; and during the week ending 2nd April 1892 the number increased to 2,533. The total amount of wages paid up to the latter week was Rs. 4,567-6-11. The average daily wage earned throughout the operations was seven pice. The work of relief was carried out largely through planters, who rendered much assistance in supervising works and in distributing loans. No loans, however, were given during the year under report.

The average price of common rice during the second fortnight of March 1892 was 12 seers 2 chitaks per rupee, against 15 seers 5 chitaks in 1890-91.

In Darbhanga there was want of water in August to enable the cultivators to plant out their seedlings; and the *bhadoi* was withering for want of rain. Only a few local

Darbhanga.

showers fell in September 1891, and the hathia or October rain proved scanty in the extreme. The winter rice on the high land was a total failure. The total outturn of that crop for the district was estimated at about 6 annas, and the yield of the *bhadoi* was expected to be not much more. The affected tracts were the Roserha and Bahera thánas, and a small portion of the Darbhanga thána to the east of Darbhanga town in the Sadar subdivision and Benpatti and Khajouli thánas, and the northern half of the Madhubani thána and a part of the Phulparas thána, adjoining the Madhubani and Khajouli thánas in the Madhubani subdivision. The Khajouli thána formed a part of the tract along the Nepal frontier, 90 miles in length, which was the chief seat of distress in 1888-89. The affected tracts, which comprised in all 1,185 square miles, or about one-third of the total area of the district, depend mainly on the rice crop. Those who suffered were the labouring classes, for whom there was no work, and the petty cultivators, who in ordinary years live on the produce of their fields, eked out with labour paid for in kind in preparing the lands of the wealthier raiyats. In the beginning of March 1892 relief works were opened in the Bheja circle, which consisted of the southern portion of the Madhopura thána. During the first week three tanks only were opened, and the average number of workers was 146 only, but in the second week, with four tanks, it rose to 1,027. The Murukhia circle was opened on the 14th March 1892 with three tanks only. During its first week the number averaged 365 only, but in the second week they rose to 1,399, falling again to 986 in the third week. In the Sadar subdivision works commenced on the 28th March 1892 in what was then called the Rohar circle, which comprised all the distressed areas from the south of the district to Bahera and Rohar on the north, and from the Bhagalpur frontier on the east to the Kamla on the west. After the close of the year this area was divided into four circles, which were named Bachowli, Hatl, Bahera, and Salehpur. The total amount of wages paid up to 2nd April 1892 amounted to Rs. 6,213-15-7. No gratuitous relief was afforded, and no loans were given during the year under report.

The price of coarse rice rose to 14 seers for the rupee in the first fortnight of January 1892 in the town of Darbhanga, and to 12 seers 1 chitak by the beginning of March, at which rate, with occasional slight fluctuations, which were always towards cheapness, it maintained itself up to the end of July 1892.

The district of Dinajpur depends for its food-supply almost entirely on the winter harvest. The autumn rice is ordinarily a little over one anna of the whole produce, or about one-twelfth of the winter rice, while the *rabi*, which consists chiefly of oil-seeds, is of importance only as a money-producing crop like jute. The area affected in this district lay north of the Dinajpur branch of the Northern Bengal State Railway, extending over 1,030 square miles, with an estimated population of 447,000 persons, and consisting of Western Thakurgaon, Ranisankail thána, and a part of the Pirganj thána in the Thakurgaon subdivision, and the Hemtabad thána, excluding Raiganj outpost and a part of the Birganj thána in the Sadar subdivision. In this area the yield of the winter rice was estimated at 3 annas, but the *bhadoi* outturn of the autumn rice was about 11 annas, and in 1890 there were bumper crops of winter rice and jute. The ordinary condition of the people of Dinajpur in regard to the means of subsistence being, moreover, distinctly above the average of Bengal, the distress in this district was never so acute as in Bihár. The Commissioner twice offered to find very remunerative work on the Duars Railway for the people of the tract where the failure had been greatest; but no one cared to go. On the other hand, the villagers, who during the scarcity worked on roads for about half the current rate of wages, ordinarily decline such work on any terms, leaving it to immigrants from Bihár. This shows that, although the pressure never passed a certain point, there was unusual want of employment.

About the 7th November 1891, some relief works were opened in the extreme north of the district, and a daily wage of 3 annas was fixed, this being three-fourths of the ordinary rate in the district. In the course of a few days it came to light that the labourers would do no work, and orders were given for strict taskwork, which had the effect of closing the works altogether.

As tests these works showed that an exaggerated idea had been formed of the distress then in the district. What ultimately necessitated the opening of relief works was the absence of the winter rain, which was required to save the very large area sown in *rabi*. Relief works appear to have been opened in January, but there were no large numbers at work till about the middle of February, when the *rabi* had perished and the prospects of the *bhadoi* became gloomy. The average number of A and B male units employed during the week ending 26th March 1892 was 789. The works were conducted by the ordinary district staff, and the registers prescribed for relief works were not kept up. A sum of Rs. 6,470-10 was expended on relief works during 1891-92.

Several small *jotidars* (cultivators), who in ordinary years would have been helped by their mahajans, had been refused assistance by them. They were in danger of having to sell their cattle and thus being deprived of the means of cultivating their fields. Steps were promptly taken to grant loans, and Rs. 353 were thus advanced up to the close of March 1892.

The first sign of approaching distress was the partial failure of the *bhadoi* crops in 1891. The Director of the Department of
 Bhagalpur. Land Records and Agriculture estimated the yield

of these crops at eight or nine annas. In the tracts which were afterwards classified as distressed the yield of the *bhadoi* did not exceed three or four annas, and in Bangaon the failure of this crop was all but complete. Finally the *rabi* crops produced an outturn of less than three annas. Notwithstanding the failure of these three crops, the condition of the people was never really one of severe famine or justified excessive anxiety.

Three tracts were classified as distressed. Two were small, each extending over an area of about 20 square miles. One lay just to the north of Supaul, and the other on the northern frontier of the district. The distress in these two areas was never very acute. The third tract, which was by far the most seriously affected, extended from the Darbhanga boundary through the thánas of Bangaon and Madhipura. The worst parts were those west of the Dimra along the Darbhanga boundary, and in the corner between Darbhanga and Monghyr. This tract comprised an area of about 400 square miles.

Relief operations were opened in the last week of January 1892. The first work undertaken was the Rajanpur embankment. But from March throughout the three tracts referred to above tank work was started, and a beginning was made in the preparation of registers of persons who would, as the distress deepened, have to be supported gratuitously. By the middle of that month 1,376 people were at work, and by the end of the month the distressed tracts had been organized into circles in accordance with the provisions of the Famine Code, and the circles had been officered. In the large tract six circles were formed, two lying within the Supaul subdivision, and four within the Madhipara subdivision. During the month there was a slight fall of rain, and the opportunity was taken to sow a little rice and moong. At the end of the month 15 tanks were in progress, and the average attendance had risen to 3,494. A sum of Rs. 6,628 was expended on relief works up to 31st March 1892. Agricultural loan advances were not begun until April 1892. The relief works and the distribution of doles were continued after the close of the year under report.

Rice was sold at the rate of 13 seers 6 chitaks for the rupee in the middle of November 1891, fell to 15 seers at the end of December, and rose to 11 seers 11 chitaks during the second fortnight of March 1892.

The drought which affected the *aghani* crop occurred in the period from
 Purnea. June to October 1891, when the rainfall was only 32.94 in the Sadar subdivision. From about

November 1891 there was no fall of rain up to about the third week of March 1892, which seriously affected the *rabi* crops. Indications of scarcity were early apparent in this district, but actual distress was confined to a well-defined tract in the Kadwa and Amur thánas in the Sadar subdivision. The outturn of *aghani* crops in these two thánas was estimated at about 2 annas, and the yield of *rabi* was about 5 to 6 annas. The area affected in Kadwa was 365 square miles, with a population of 139,289, and that in Amur 285 square miles, with a population of 122,481 souls. In March a deduction from the area

was made on the east of the two thánas, and a corresponding addition from the west. The estimated area virtually remained constant all through the relief operations.

Relief works were started in the latter part of January 1892, and were most largely attended in March and the first half of April, the largest daily average attendance (3,206 A and B male units and 4,349 C male units) being in the week ending 12th March 1892. They were continued till after the close of the year under report. The total amount expended on the relief operations was Rs. 20,577-15.

The rates of wages given at first were 1 anna 6 pies to an able-bodied man, 1 anna 3 pies to an able-bodied woman, 9 pies to an able-bodied child, and 6 pies to other children able to work. The wages were all along based on 11 or 12 seers per rupee, between which the rate of rice fluctuated. There was for a long time a great failure to enact sufficient tasks, but from the latter half of March a considerable improvement was effected by the introduction of the piece-work system. The expenditure on relief works up to 31st March 1892 amounted to Rs. 15,700. The works were continued after the close of the year.

The distribution of gratuitous relief was commenced on the 30th January 1892. The highest number in receipt of this form of relief was 1,065 adult units, which figure was reached in the week ending 19th March 1892. The average number was stated to be 668, or 2 per thousand of the population of the affected tract. The expenditure on gratuitous relief up to the 31st March 1892 was Rs. 1,381. The Relief Committee organised in February 1892 in all the subdivisions of this district for raising subscriptions collected Rs. 3,099-12, exclusive of miscellaneous contingent charges incurred by them. They have paid to Government Rs. 2,380, and the balance of Rs. 719-12 is in their hands. Gratuitous relief was continued after the close of the year under report.

Inquiries with a view to the distribution of agricultural loans were very promptly undertaken, and a sum of Rs. 13,732 was advanced before the end of March 1892. The pressure on the poorer raiyats was considerably relieved by this means.

The price of common rice was 11 seers a rupee during the second fortnight in March 1892.

From the first, the cause of anxiety was chiefly confined to the low tract of country stretching away to the north of the river, where the rice crop was very scanty, and finally active distress operations were only required in the extreme north of this belt round the outpost of Bakhtiarpur. The tract covers an area of some 400 square miles, of which the western portion is entirely flooded during the rainy season, and is devoted to paddy. The almost complete failure of the paddy in 1891, after a very small crop in 1890, rendered the larger part of the population wholly dependent upon *sag* and roots.

To the south of the Ganges distress was felt more or less severely in several localities, especially in the Jamui subdivision, where, however, large zamindars came forward to help their raiyats with relief works and charity, and their active assistance rendered unnecessary the co-operation of the Government.

Two relief works,—(1) on the Bulhia-Khagaria road, (2) on the Mansi-Bakhtiarpur road,—were started on the 7th February 1892 with 156 labourers. The number rose to 574 in the week ending 27th February, but fell to 49 in the last week of March. During the first week or two $1\frac{1}{2}$ anna was given per 100 cubic feet to males, and one anna to females for a corresponding task. This rate was soon lowered to $1\frac{1}{2}$ anna for males in strict adherence to the Famine Code, this being found sufficient to buy the prescribed quantity of *kurthi*, the prevailing grain in the market. Relief works were continued after the close of the year. Rupees 667 were expended on them up to 31st March 1892. Gratuitous relief was begun in the latter part of February 1892, and continued after the end of the year under report. The highest figure was reached in the week ending 5th March, when 250 persons were relieved. A good deal of relief was afforded to respectable women by the distribution of cotton for spinning. A sum of Rs. 289 was expended on gratuitous relief during the year.

The price of coarse rice was 10 seers 8 chitaks per rupee, and *kurthi* was sold at 20 seers a rupee during March 1892.

Land Records, Agriculture and Horticulture.

REPORTS on the Nadia and Cuttack districts by Mr. Bhupal Chandra Basu and Mr. Nagendra Nath Banerji, the Director's two assistants, have been under preparation

Analysis of districts.

during the year, but have not yet been published.

The Hon'ble Mr. Mackay, C.L.E., and Mr. Finucane visited Bihâr in November 1891, and discussed there, with several of the District Collectors, the question of encouraging

Emigration to Burma.

emigration to Burma. The result of their discussion was that Mr. Mackay undertook to send recruiters to Chapra, Darbhanga, Gaya, Shahabad, and Muzaffarpur, and the Collectors undertook to support the recruiters, and to see that suitable emigrants were selected, and that they understood the terms on which they were going. The kind of emigration especially aimed at is temporary emigration for a few months only of the year, during which there is no work to be obtained in the Bihâr districts, and it was thought that, if a few hundred men could be induced to go over and were to return with a saving of thirty or forty rupees, others could easily be induced to follow. The number, however, who have so far availed themselves of the reduced fares offered by the British India Steam Navigation Company is small, only six batches containing 142 emigrants having actually gone to Burma.

An incident in this attempt to popularise emigration, which came directly under the Lieutenant-Governor's eyes, deserves to be recorded here. Sir Charles Elliott when passing through Siwân saw a large number of persons who had volunteered for Burma, under the auspices and encouragement of Mr. Tytler, the Sub-Deputy Opium Agent. They were most anxious to go, and even impatient and angry at not getting their orders and advances, and His Honour had to assure them that he would do personally all he could to ensure that no further delay took place. They were all known to Mr. Tytler, who took immense trouble in the matter, and they had complete confidence in him, and if ever any men were in earnest in their desire to emigrate, these men were. Yet when they got to Calcutta some foolish or designing people got hold of them and frightened them, and all but 27 out of a party of 80 absconded. This is an example of what so often happens in emigration to Assam and elsewhere, and makes it easier to understand the difficulties of planters and contractors, and how little sympathy the people often deserve, who are described in newspapers and representations to Government as crying out at railway stations and on steamers that they have been kidnapped and deceived.

Mr. Nitya Gopal Mukerji has carried on, during the year, his experiments in the eradication of silkworm disease and in the production of pure seed at outstations away

Silk culture.

from the silk districts of Bengal. There has been a good demand for the seed which he has introduced, and the results also obtained from the seed distributed by him have been good. His present difficulty appears to be to obtain sufficient notice of the amount of seed likely to be applied for, so as to arrange for its despatch in proper time from the outstations where it is collected.

Swarms of locusts visited the districts of Northern and Central Bengal and the Orissa and Chota Nagpur Divisions, but the damage done by them does not appear to have

Locusts.

been extensive.

As in the previous year, agricultural experiments were conducted by the Director's two assistants on farms at Burdwan, Dumraon, and Sibpur. Mr. Nagendra Nath Banerji

Burdwan experimental farm.

was in charge of the Burdwan experimental farm. Experiments were carried out in the following crops: Sugarcane, fodder-grasses, jute, paddy, maize, cotton, potatoes, wheat, barley, gram, and oats. In sugarcane, the results were,

among other things, to establish the utility of the ratooning process with certain coarser kinds of cane, and also of the process of sowing in trenches on the Mauritius system, instead of in shallow furrows as is ordinarily done by cultivators in this country. The experiments in fodder-grasses showed that sorghum can be grown at a nominal cost of 1 to 2 pie per maund, and the Board of Revenue observe, with reference to this, that a large sorghum farm near Calcutta would be a paying concern, if it could be grown there at the same cost. It appears, however, from the account of the cultivation of sorghum at the Sibpur farm, that the cost there is considerably higher, viz., 5 pice per maund.

The following table shows the outturn and profit per acre of winter paddy under different kinds of manure :—

Manures.	Outturn per acre.			Net profit per acre.		
	Mds.	s.	c.	Rs.	A.	P.
Bone-meal and saltpetre	54	0	0	61	6	6
Cowdung (average)	47	9	10	56	9	6
Bone-meal	47	22	12	56	7	0
Castor-cake (average)	46	18	6	50	11	7
Unmanured (average)	21	9	9	19	9	0

Under the instructions of the Government of India experiments were tried in cutting the tops of maize cobs for fodder before the crop is quite matured, but the result was only to diminish the outturn, and cattle would not eat the fodder so produced.

The crop of manured Naini Tal potatoes was higher than in any preceding year. The greatest outturn,—199 maunds to the acre,—was obtained with a mixture of cowdung, ashes, bone-meal, and castor-cake, but the highest profit was got from cowdung and castor-cake alone, which gave a profit of Rs. 202-8 over the unmanured plot.

The financial result of the farm showed a great improvement on previous years. The total expenditure was Rs. 1,565, but this includes the pay of an overseer and a peon, besides stamps and stationery. The income was Rs. 1,162 as against Rs. 808 only in the previous year.

The experiments at the Dumraon farm in winter paddy agreed with those at Bardwan in showing saltpetre to be one of the most valuable manures for the crop. It is reported, however, that some experiments in deep versus shallow ploughing turned out in favour of deep ploughing, whereas last year a contrary result was obtained. It is stated that this cannot be accounted for. It shows how comparatively little store can be set by the results of experiments conducted on these small experimental farms.

In sugarcane the Mauritius system as at Bardwan showed good results as compared with the local method.

The total expenditure at Dumraon and Bhojpur on the experimental farm and economic museum amounted to Rs. 1,896. Deducting Rs. 1,282, debitable to salaries and miscellaneous expenses, the actual cost of cultivation was Rs. 614, against which there was an income of Rs. 717.

The experiments conducted at Sibpur were of a similar character to those in the other farms. The Mauritius system of planting sugarcane did not, however, show any superiority at Sibpur over the native method. The same result as at Bardwan was obtained by lopping off the tops of the maize plants before maturity.

The experiments made at these farms in growing gánja with a view to comparing the outturn with that of the gánja-growing tract in Rajshahi, so as to show whether any portion is withheld by the cultivators there, were very inconclusive, and in the Lieutenant-Governor's opinion it was useless to attempt to grow the plant in soil and climate unsuited to it.

The net expenditure on actual cultivation was Rs. 1,368, and, the net income only Rs. 1,137, from which it is apparent that this is the least profitable of the three experimental farms.

Besides the three farms mentioned above, minor experiments, chiefly in regard to the cultivation of sugarcane, wheat, and potatoes, were carried on in a number of private and wards' and Government estates throughout the Province.

The manufacture of bone-meal was continued during the year at the Jalpaiguri jail from bones collected by Chamars in the Rangpur, Darjeeling, and Jalpaiguri districts. One hundred and eighty-six maunds of fine meal were produced, of which 77 maunds were sold to European planters and officials, and 28 maunds to native cultivators. The bone refuse left in the *dhenkis* amounted to 144 maunds, of which $26\frac{1}{2}$ maunds were reduced to ashes and so utilised.

The reports received from different parts of Bengal, including the hills, agree almost unanimously that the Sibpur iron-ploughs are too heavy for the country bullocks, and unsuitable to native cultivation. They were also found by an experiment in Kurseong to be unsuitable to the hill slopes.

The cream separators and butter churns tried at various places gave fair results, especially in the Terai and hill districts, but their cost is prohibitive for ordinary native use.

The veterinary school and hospital near Calcutta, established with a view to the investigation and treatment of cattle-disease and the furthering of veterinary science generally in Bengal, is now in course of construction, thanks to the liberality of Babu Sheo Baksh Bagla and Sir Dinshaw Manockjee Petit. Veterinary Captain W. D. Gunn has lately been appointed by the Government of India to be the Bengal Veterinary Officer and will have charge of the institution. Meanwhile, until the buildings are constructed, his services will be utilised in connection with District Boards and in all cases of outbreaks of cattle-disease.

The year was one of great activity as regards outdoor operations, and much was done to improve the condition of the driving roads in the garden. The season was abnormally dry; and though in the conservatories but little damage was done, it is to be regretted that out of doors, despite the exertions of the garden staff, many casualties occurred, especially among the finer and rarer palms. Valuable additions were made to the Herbarium, including a rich collection of plants from Kew, a beautiful collection of Australian plants from Baron Von Müller, and collections from the North-West Himalayas, Jaunsar-Bihâr, Dehra Dun, the Malay Peninsula, North Canara, Sindh, Chota Nagpur, Khasia Hills and Manipur, Upper Burmah and Assam, the Duars, Independent Sikkim, and Laccadive Archipelago. Dr. Prain visited the Andaman Islands, Parasnath, and the Khasia-Jaintia Hills; and his botanical explorations, as well as those of collectors employed by the Calcutta garden, have added some valuable collections. During the year the third volume of the garden annals was issued, and the bulk of the material for the fourth volume, containing a monograph by Dr. King on the important family of *Anonaceæ*, was prepared. Both Dr. King and Dr. Prain continued to contribute valuable papers on botanical subjects to the Journal of the Asiatic Society of Bengal.

The Lloyd Botanic Garden in Darjeeling was visited in July last by flights of locusts, which caused at the time considerable damage to the plants. The mischief was, however, speedily repaired, and the garden is now reported to be in excellent order.

Forests.

THE Bengal forests were under the able charge of Mr. E. P. Dansey, who acted as Conservator throughout the year. His tours covered a period of 251 days, in the course of which he paid two visits to Orissa in connection with the forests of Angul and Khurda, travelled over the whole of Chota Nagpur, examining the Paláman, Ranchi, and Koderma forests, and acquiring a fair insight into the condition of the private forest estates, visited the Sonthal Parganas, inspected the forests of the Jalpaiguri Division, and had nearly completed his inspection of the Buxa forests, when he was compelled by fever to return to head-quarters, which he reached on the 1st May. One instance of the beneficial result of this tour may be cited in regard to Singhbhum, where Mr. Dansey found that sál trees were being sold at a fixed price per tree, with option to the purchaser to choose his own trees. Under his direction this faulty procedure gave place to a system under which a given number of trees are marked on a given area irrespective of the quantity and quality of the timber, except that trees apparently hollow are excluded. The marked trees are then advertised in lots and tenders invited. The introduction of this system raised the average price of sál trees in Singhbhum by one-half.

During the year the Rajin forest in the Puri Division, formerly a Protected forest, was added to the area of Reserved forests, which was thus increased, after making allowance for some small deductions, by 21 square miles; the total area for the year under report being 5,210 square miles, as compared with 5,189 square miles for the previous year.

Deducting the Rajin forest, and excluding certain forest lands in the Sundarbans, which were given up for purposes of cultivation, the area of Protected forests, which at the commencement of the year was 2,289 square miles, was diminished to 2,181 square miles at its close. To this, however, must be added the Government forests in the Sonthal Parganas, constituted such by the Act of 1865, though not hitherto brought under the management of the Forest Department.

The Unclassed forests, confined to Chittagong and Chota Nagpur, which are under the partial management of the Department, are believed to exceed 4,500 square miles.

In several instances planters in the Kurseong Terai have been granted locations for their coolies within the Reserved forest, a few acres being given up for this purpose. These cessions are made by Government ungrudgingly to secure healthier sites for the coolies, who suffer from fever in the Terai, care only being taken that they do not trespass into or injure or burn the adjoining forest.

The Lieutenant-Governor has approved of the principles involved in the joint proposals of the Commissioner of Bhágalpur and the Conservator for the management of the forests in the Sonthal Parganas, which will necessitate the creation of a separate Forest Division in that locality. But before the scheme can be submitted to the Government of India, it is necessary to come to a definite understanding on the question of forest settlement, which is still pending.

The proposals which the Commissioner of Chota Nagpur and the Conservator have put forward with a view to bringing the Unclassed State forests in Chota Nagpur under the management of the Department, as Protected forest, were approved by the Lieutenant-Governor, and have since received the sanction of the Government of India, to whom they were submitted. Not the least of the

The Conservator's tours of inspection.

Area of Bengal forests.

Locations for coolies in the Terai.

Proposals for extending the operations of the Forest Department—

In the Sonthal Parganas.

State and private forests in Chota Nagpur.

benefits to be anticipated from this policy is the likelihood that, when its advantages are made apparent, it will be extensively followed by the private owners of large forest estates in the division, and by the Native Chiefs. The Commissioner has already been requested to use his influence with the latter in this direction, and in particular to ask them to prohibit the felling of immature *sāl* trees having a girth (at four feet from the ground) of less than six feet. Such action was the more necessary, as the Chiefs have been tempted to dispose of their timber without restriction to contractors anxious to supply sleepers to the Bengal-Nagpur and East Coast Railways. Contracts of this kind, however, given by the Chiefs to private firms are invalid, unless they have been approved and confirmed by the Commissioner.

The Lieutenant-Governor agrees with the Conservator that the Unreserved forests of Angul should be subjected to some form of forest management, the same leniency of treatment being extended to the neighbouring raiyats as in the case of the Khurda forest.

The weakness of the Forest establishment of Bengal is a very serious drawback, and the Lieutenant-Governor was disappointed to learn in reply to his request that the Government of India would post an officer to the Circle to replace the late Mr. Henvey, that it would be impossible to appoint any new officers to Bengal till 1893. Owing to the present weakness of the staff it has been found impracticable to make any substantial progress with the preparation of working plans. There are at present only two officers in the Circle, excluding Messrs. Chester and Rogers, both on deputation outside Bengal, who are qualified to undertake a working plan, and these officers cannot be spared for special duty. Until, therefore, the Department receives an addition to its strength, no improvement in this direction can be looked for.

The number of officers in the superior grades is now one short of the number sanctioned, the gap caused by Mr. Henvey's death not having been filled up. Mr. Fowler, who was transferred to Bengal from the Central Provinces in 1888, died at Ceylon on his way to Europe on leave.

The Conservator has little to say in praise of the Subordinate Forest establishment, which has been for some time in great need of reinforcement. Proposals for the reorganization of this establishment were submitted to the Government of India in June 1891, but no orders have yet been received, the delay being probably due to the necessity of harmonising the Bengal scheme with those framed in other Provinces of India. A revised scheme for the whole of India, formulated by the Inspector-General of Forests, has lately been received, and has been referred to the Conservator, and His Honour trusts that, when final orders are passed, a much-needed reform will be effected.

The Dehra Dun Forest School supplied no Forest Officer to Bengal during the year. Of the eight native officers received from the school in previous years, only one now remains. At present there are only two Rangers drawing as much as Rs. 80 a month. It is proposed that in future there shall be three Rangers on Rs. 150, three on Rs. 125, three on Rs. 100, and three on Rs. 80. With such advancement to look forward to, the Department should be able to secure men who combine activity with intelligence.

A great decrease is noticeable in the number of forest cases which were taken into Court, being 79 in 1891-92 as compared with 203 in the previous year. This result is attributed to a change of policy in the Sunderbans, of which the Lieutenant-Governor approves. The policy is thus described:—

"A large number of cases were instituted by Mr. Ellis in previous years against purchasers who had failed to return their permits according to rule 3 of the rules printed on the reverse of their permits, and who had got away undetected. But as these persons could, in general, only be traced by their registered, and often false, addresses, it followed that the majority of such cases had to be withdrawn later on, the police not succeeding in discovering the offenders. It was decided during the present year to desist from this fruitless course, and to endeavour to attain our object, if possible, by the exercise of a better system of supervision. The prosecutions under this head were consequently confined to people apprehended in the act of evading the law."

Out of an area of 1,975 square miles of forest specially protected from fire, 401 square miles were burnt. In the previous

Forest fires.

year 1,464 square miles were protected, and 75 square miles were burnt, the percentage of specially protected forest which escaped fire being thus 80 in 1891-92 as compared with 95 in 1890-91. The extension of the protected area occurred for the most part in Singhbhum, where an attempt was made to protect the whole of the Reserved forest comprising an area of 730 square miles. This attempt was only partially successful.

In the Jalpaiguri Division a fire of some magnitude occurred in the Tendu forest, occasioned probably by an act of carelessness on the part of the coolies employed on the Ramshuihat Branch of the Duars Railway. The Lieutenant-Governor agrees with the Conservator that it is futile to attempt to preserve from fire the plains of grass which are interspersed between the belts of tree forest in the Jalpaiguri Division.

It is reported that the Darjeeling Division escaped the fires which usually follow the flowering of the bamboos in the Singalila Range, the action of the Nepalese authorities in protecting their forests across the border having proved to some extent a safeguard.

The expenditure on communications during the year was Rs. 6,910, as compared with Rs. 6,068 in the previous year.

Communications.

This branch of forest work is in a backward state. Owing again to the want of officers, it was found necessary to keep in abeyance for the present the preparation of a general project suggested by the Government of India for the extension of forest roads in Bengal during a series of years.

The total outturn of the Circle in timber was 72½ lakhs of cubic feet, and that this quantity, if the factor of conversion hitherto

Outturn.

used had been retained, would have appeared as 100 lakhs of cubic feet, compared with 83 lakhs in 1890-91.

Of this 72½ lakhs of cubic feet, only 24,000 cubic feet were the outturn of departmental agency, the remainder being set down to the agency of traders. The policy of discouraging departmental operations was approved.

The total outturn of fuel was 180 lakhs of cubic feet, against 166 lakhs in the previous year; the outturn of bamboos was 162 lakhs of bamboos against 165 lakhs; and the total value of the outturn of minor produce was Rs. 91,000 against Rs. 86,000, free grants being excluded in each case.

The outturn of timber in the Sundarban and Singhbhum Divisions showed an increase of 13 lakhs and 4 lakhs of cubic feet, respectively, over that of the previous year.

The financial results are satisfactory, and compare as follows with those of the three previous years:—

Financial results.

YEAR.		Receipts.	Charges.	Surplus.
		Rs.	Rs.	Rs.
1888-89	...	6,76,907	3,75,471	3,01,436
1889-90	...	7,68,718	3,90,265	3,78,453
1890-91	...	7,27,392	4,14,005	3,13,387
1891-92	...	7,89,553	4,08,519	3,81,034

The following statement shows the financial results for each Division in comparison with the figures for the previous year:—

DIVISION.	Receipts.		Charges.		Surplus.		Deficit.	
	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Director	8,480	4,995	40,100	23,713	...	...	31,420	24,722
Buxarilgh	...	1,015	...	3,300	...	...	...	1,724
Darjeeling	84,225	89,708	88,300	78,847	83,225	10,881	...	...
Dina	31,070	21,348	14,048	13,712	16,108	6,876	...	...
Kurseong	18,728	17,743	21,597	23,008	...	...	2,350	6,151
Jalpaiguri	23,007	31,088	25,000	10,538	...	12,005	1,009	...
Nager	13,405	23,308	23,180	37,004	...	...	10,724	14,238
Palamou	2,038	4,434	10,728	16,413	...	...	7,308	10,077
Singhbhum	84,318	28,000	30,803	22,468	84,638	3,850	...	...
Sundarban	4,08,084	4,10,483	3,18,544	77,711	3,46,490	3,7,772	...	...
Chittagong	77,880	82,350	28,000	38,703	44,228	42,430	...	...
Angul	2,119	...	11,005	...	...	...	8,470	...
Puri	9,389	18,000	14,004	12,631	...	...	8,601	17,028
Kand (Drift)	28	218	...	...	28	210	...	...
Working-Plans	43	...	14,823	17,000	...	...	14,321	17,000
Total	7,89,553	7,27,392	4,08,519	4,14,005	4,64,100	4,08,519	83,360	25,450

It will be observed that there was an improvement in every Division except Jalpaiguri, where a surplus was turned into a deficit.

Manufactures, Mines and other Industries.

The following statement, prepared as usual from the reports furnished by Messrs. Moran and Company, shows the actual yield of indigo during the year 1890-91, as compared with the estimate for that year, and the probable outturn for 1891-92:—

	Estimated yield for 1890-91. Mds.	Actual yield for 1890-91. Mds.	Estimated yield for 1891-92. Mds.
Jessore ...	3,500	3,282	1,550
Krishnagar ...	5,500	5,277	1,790
Midnapore ...	1,100	1,012	1,350
Burdwan ...	500	435	285
Malda ...	1,600	1,691	675
Murshidabad ...	5,900	6,174	2,000
Rajshahi and Pabna ...	1,700	1,728	300
Blágalpur ...	2,600	2,659	1,700
Purnea ...	7,300	7,447	3,800
Rangpur and Nator ...	1,800	1,079	550
	31,500	30,814	14,000
Monghyr ...	3,400	3,472	1,100
Tirhut ...	41,700	42,561	21,300
Champaran ...	22,200	23,045	12,100
Chapra ...	16,700	18,055	9,500
	84,000	87,133	44,000
<i>Benares—</i>			
European ...	...	4,683	
Native ...	...	5,353	
	8,000	10,036	9,000
<i>Doab—</i>			
European ...	...	3,004	
Native ...	...	19,519	
	22,000	22,523	20,000
Total	1,45,500	1,50,506	87,000

It will thus be seen that the actual yield for 1890-91 exceeded the estimate for that year by 5,000 maunds, and of the actual yield for 1889-90 by 49,773 maunds, a result which may be considered as satisfactory. The estimate for the year 1891-92 is the smallest known for many years.

The table below shows the exports of indigo to foreign countries during the past two years:—

	1890-91.		1891-92.	
	Cwt.	Rs.	Cwt.	Rs.
To United Kingdom ...	32,443	92,74,475	31,748	85,96,236
„ Austria—Trieste and Fiume ...	7,944	23,71,504	10,116	29,92,878
„ France ...	8,619	21,52,245	14,354	39,84,834
„ Germany ...	6,974	22,18,570	11,776	31,42,926
„ Italy ...	330	1,08,579	1,201	3,20,164
„ Egypt ...	25	8,360	1,501	4,52,005
„ United States ...	12,220	31,14,705	20,261	48,89,126
„ Persia ...	284	1,01,139	493	1,47,255
„ Turkey in Asia ...	1,194	3,26,686	3,491	9,40,838
„ Other countries ...	2,895	8,37,191	3,146	8,94,145
Total ...	99,819	2,05,11,354	98,075	2,63,50,394
Quantity in Indian maunds and average value per Indian maund.	95,032	@ Rs. 216 per Indian maund.	1,33,491	@ Rs. 197 per Indian maund.

The exports of indigo during the past year were the largest known for many years, the advance in comparison with 1890-91 being 40½ per cent.

The shipments to the United States, Austria, France, and Germany were all considerably larger than in the past year, while there was a decline to the United Kingdom.

The quality of the crop was generally up to the average, but prices were lower, owing no doubt to the large outturn, the average value as shown in the table being the lowest ever reached.

In the London market prices were generally lower, and for many descriptions were fully one shilling per pound lower at the end of the year than they were at the beginning. Deliveries were smaller, and there were smaller re-exports, though the home trade was fairly satisfactory. The use of substitutes is further extending, causing a lower range of prices, and with it a falling off in consumption. Alizarine and other coal-tar products have been used to the detriment of indigo, but it is said they are really dearer in price, though simpler in use, and that they do not give the satisfaction in dyeing woollens as indigo does, and so long as the prices of indigo continue on the present low scale, there is not much fear of the consumption being materially affected. The good quality of the crop of 1890-91 may also have had some effect in producing the falling off in the deliveries.

During the year under report the number of gardens in which tea was cultivated was 414 against 416 in 1890, and the total area under tea was 90,815 acres against 85,573 acres, of which 75,392 and 15,423 were under mature and immature plants, respectively, against 70,522 and 15,051 in the preceding year. The outturn of tea was 27,282,743lbs., against 25,004,389lbs. in 1890, and the average yield per acre rose from 355·9lbs. to 361·8lbs.

The following statement is illustrative of the state of tea cultivation in Bengal during the calendar year 1891:—

Divisions.	Districts.	Number of plantations.	Approximate average elevation in feet.	AREA IN ACRES.				APPROXIMATE YIELD IN POUNDS.			Average yield in pounds per acre of mature plants.
				Under mature plants.	Under immature plants.	Total area under tea.	Taken up for plantings, but not yet planted.	Black.	Green.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12
Chittagong ...	Chittagong ...	24	10 to 150	3,763	43	4,243	1,770	1,029,669	...	1,029,669	271·4
	Chittagong Hill Tracts ...	1	30	100	...	100	...	27,216	...	27,216	272·1
Chota Nagpur ...	Hazaribagh ...	6	2,204	912	...	912	1,502	152,314	...	152,314	120·4
	Loahardua ...	27	1,000 to 2,000	2,407	233	2,640	1,803	361,381	47,316	408,697	151·7
Majshahi ...	Darjeeling ...	179	60 to 7,000	40,887	0,329	41,216	13,341	10,643,045	310,754	10,953,799	265·01
	Jalpaiguri ...	177	200 to 2,000	27,201	4,000	31,201	27,305	14,701,540	...	14,701,540	441·58
	Total ...	414	...	75,392	15,423	90,815	41,081	26,010,474	361,020	26,371,494	361·8

The following is a *resumé* of the reports received from the several tea-producing districts:—

Tea is grown only in the Chittagong and Hill Tracts districts of this Division. As in the previous year, the number of gardens worked in Chittagong itself was 24, of which 23 only furnished returns.

The total outturn in the Chittagong district amounted to 1,029,669lbs., against 1,119,793lbs. for 1890-91 with a decrease of 90,124lbs., or 8·04 per cent., and the average yield was 271·4 against 297·02. In the Chittagong Hill Tracts only one garden was worked as in the previous year. The total yield fell from 28,080lbs. to 27,216lbs., the average yield per acre being 272·1lbs. against 280·8lbs.

The decrease in the production of tea is ascribed to the insufficiency of rain, and prices ruled lower than before, owing in a great measure to the unsettled state of exchange.

Owing to the gradual decrease in the yield of tea, the six tea gardens shown in the return for 1890 were closed before the commencement of the season of 1891, and the Dacca district has accordingly been omitted from the statement.

Dacca Division.

Rajshahi Division.

Darjeeling and Jalpaiguri are the only tea-growing districts in this Division.

The number of gardens worked in Darjeeling was 179, against 177 in the previous year, the increase being due to the fact that two gardens were amalgamated and four more were returned by the planters, thus showing a corresponding increase in the acreage and yield.

The areas under mature and immature plants were 40,889 and 6,329 acres, against 39,371 and 6,214 acres respectively of the preceding year. The total outturn amounted to 10,958,800lbs. against 10,910,487lbs., the average yield per acre being 268.01 against 277.1 in the previous year. No new facts have been brought to notice in respect to the character of tea plants, the machinery used, or the treatment of coolies.

In Jalpaiguri the number of gardens was 177, against 173 in the previous year. The areas under mature and immature plants were 27,201 and 8,406 acres, against 23,978 and 8,213 acres respectively in the previous year. The approximate outturn amounted to 14,731,546lbs. against 12,436,591lbs., giving an increase of 2,294,655lbs. in the yield. There has thus been an increase in both the number of gardens at work and the outturn of the crop. The average yield per acre has also increased from 518.6 to 541.58 in the year under report. The increase in the outturn is attributed to the rainfall, which seemed well adapted to tea cultivation. The hybrid plant is most common in this district. China plants are found in a few of the older gardens, while Assam and Manipur plants are imported by such of the gardens as can afford to pay for them. Some of the local gardens also supply seeds, but these are of an inferior description.

Machinery has been introduced in almost all the gardens in this district, by means of which the entire process of converting the gathered leaf into tea is effected.

As reported in the previous year, indigenous labour is not obtainable in this district, and coolies have to be imported from Nepal and the districts of Chota Nagpur. The rates of wages given to the coolies are Rs. 6 for men, Rs. 5 for women, and Rs. 3 for children. Cholera in an epidemic form attacked some of the tea gardens, and there was in consequence a very heavy mortality among the coolies. The disease is said to have been brought from Naihati in Hooghly after one of the great bathing festivals.

Chota Nagpur Division.

Tea is grown only in the Hazáribágh and Lohardaga districts in this Division.

In Hazáribágh the number of gardens worked was the same (six) as in the two preceding years. The total outturn was 136,314lbs. against 108,519lbs., and the average yield per acre was 149.4 against 110.00lbs. in the previous year.

The number of gardens worked in the Lohardaga district was 27, against 29 in the previous year. The total outturn was 392,198lbs. against 404,817lbs., and the average yield per acre was 119.7, against 173.3 in the previous year.

It is stated that the weather throughout the year was unfavourable for tea.

In the Chittagong Hill Tracts 116lbs. only of coffee were produced, against 120lbs. in 1890. In the other divisions there are

Coffee.

no regular coffee plantations, but the shrub is grown to a small extent in the district of Lohardaga, and the local berry can be bought in the Ranchi market.

In marked contrast with the heavy rainfall in 1890-91, the year under report witnessed the scantiest fall at the plantation

Cinchona Plantation and Cinchona Factory in Bengal.

since its formation, being 81 inches, against an average of 126. Fortunately it was well distributed and

proved sufficient for the requirements of the plants. Flights of locusts visited the cinchona reserves, but caused no material injury to the cinchona trees, which they passed by for the leaves of the acacias and the wormwood which abounds in these parts. The number of cinchona plants in the plantation on the 1st April 1892 was 4,369,971, of which 3,149,971 were quinine-yielders. The cultivation of the *Calisaya Verde* and *Morada* species, of which

great hopes were at first entertained, is being gradually abandoned, their yield of quinine being scanty as compared with that of *Calisaya Ledgeriana*, which must occupy the first place on the plantation as a quinine-yielder. No red bark trees were planted out during the year, while the number of such plants uprooted was 200,000. This is in accordance with the policy steadily observed for years past of gradually reducing the red bark trees, which, though rich in the inferior alkaloids, are poor in quinine. The complete exhaustion of these plants is only a question of time, the object being to gradually convert the Government Plantation into a source of quinine rather than of cinchona febrifuge.

The crop collected amounted to 285,560lbs. of dry bark, against 293,972lbs. in the previous year, of which 80,430lbs. were of red bark, 114,540 of *Ledgeriana*, 70,870 of hybrid, 10,170 of *Verde* and *Morada*, and 550 of Crown or *Officinalis* bark. In other words, the crop was composed of 205,130lbs. of the quinine-yielding and 80,430lbs. of the febrifuge-yielding barks. The whole of this crop, with the exception of a small quantity supplied on indent or sold to Government institutions, was made over to the Febrifuge Factory for disposal.

The outturn of the factory, which is regulated by the demand, was 4,586lbs. of sulphate of quinine and 4,190lbs. of febrifuge, against 4,010 and 4,031lbs., respectively, in 1890-91. The entire quantity was manufactured by the fusel oil process, which continues to work satisfactorily. The issues from the factory were larger than those in the preceding year, as will be seen from the following table:—

	1891-92.			1890-91.		
	Sulphate of quinine.	Cinchona febrifuge.	Total.	Sulphate of quinine.	Cinchona febrifuge.	Total.
	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.
To Medical Depôt, Calcutta ...	1,023 0	1,013 0	2,036 0	850 0	300 0	1,150 0
Do do, Bombay ...	...	...	...	400 0	1,460 0	1,860 0
Do do, Broomfield ...	712 0	412 0	1,124 0	1,000 0	...	1,000 0
To Inspector-General of Civil Hospitals, Bengal ...	9 8	100 4	309 12	...	4212 12	222 12
To Inspector-General of Jails, Bengal ...	20 4	40 0	100 4	4 0	1100 8	110 8
To Commissioner Department for Port Blair ...	...	...	...	75 0	...	75 0
Sold to Government officers ...	1,052 14	...	1,052 14	1,631 11	...	1,631 11
Sold to Government officers and to the general public ...	...	2,457 12	2,457 12	...	12,321 8	2,321 8
Given as samples ...	3 2½	20 12	23 14½	6 12	50 4	56 16
Total	3,715 12½	4,123 12	8,438 8½	3,780 8½	3,257 0	7,037 8½

* *Officinalis* 11lbs. 12oz. were crystalline febrifuge.

† Ditto 7 " 0 " ditto ditto.

‡ Ditto 0 " 0 " ditto ditto.

§ Ditto 0 " 4 " ditto ditto.

The revenue derived from the sale of sulphate of quinine, cinchona febrifuge, cinchona bark and other products of the plantation amounted to Rs. 1,09,321-12-9, against Rs. 1,18,576 in the previous year:—

	1891-92.			1890-91.		
	Rs.	A.	P.	Rs.	A.	P.
By sale of febrifuge, sulphate of quinine, &c. ...	60,713	7	3	60,885	0	0
By credit from the medical depôts and the Commissariat Department ...	44,363	6	6	52,966	4	0
By credit from the Inspector-General of Civil Hospitals, Bengal ...	3,118	8	0	3,141	12	0
By credit from the Inspector-General of Jails, Bengal ...	1,126	8	0	1,593	0	0
Total ...	1,09,321	12	9	1,18,576	0	0

The net profit on the working of the estate amounted to Rs. 7,962-12-8, against Rs. 17,040-2 in 1890-91. The decline is attributed to the unusually low market rates, above which the Government quinine is not sold. The profit, small as it is, is sufficient. As explained in last year's Report, the Government does not aim at a profit, the sole object in establishing the cinchona plantations being to secure for the people a cheap remedy for fever. In pursuance of this principle the question of reducing the price of Government quinine lately engaged the attention of Government. Under the orders of the Government of India, the rate for locally manufactured quinine supplied to Government should be the rate in England of Messrs. Howard

and Son's quinine on the 1st January each year converted into Indian currency at the official rate of exchange. The price of the quinine supplied to Government officers and local authorities is, however, slightly higher than that charged to medical depôts, and the question is under consideration whether the former should not be placed in the same position as the latter. Another important scheme is now being matured by which pure Government quinine will be placed within the easy reach of the poorer classes in Bengal. The quinine will be made up into packets containing five grains each and sold for a pice apiece. The sales will be conducted at all public offices in the interior, such as thánas and police outposts, dispensaries, offices of managers of wards' estates, etc., and also through the more effective agency of the village post-office.

Among industries it is noticed that indigo is almost defunct in Burdwan.

GENERAL ACCOUNT OF THE MANUFACTURES AND MINES IN THE SEVERAL DIVISIONS.

Burdwan Division.

The quantity of mulberry silk manufactured rose nearly 50 per cent. in Birbhum, while that of tassar silk fell off both in that district and in Bankura. Jute and gunny showed a marked recovery in Howrah from the depression of the preceding year. The decay of the old native industries before improved European methods is exemplified in the case of cotton cloth and of paper. Of the former, the outturn increased in the year, but the Commissioner writes: "This, however, is little more than a pause in the ebbing tide: the competition of European piece-goods is steadily killing the industry. In Katwa, the cloth workers of two villages have taken to silk weaving. Elsewhere they are gradually merging in the agricultural population." In the paper industry the Bally mills are swamping all native competitors of the old style.

The output of coal from the Burdwan and Bankura mines was 1,034,393 tons during the year, as against 1,131,081 tons during 1890-91. The average number of workpeople employed in 1891-92 was 14,917.

Forty-six mills, presses and factories were at work in the 24-Parganas at the end of 1891-92, the number being the same as in the previous year. A glass manufactory with a

capital of Rs. 3,00,000 was opened at Titagar towards the end of the year, but it is not yet in a position to furnish statistics of its outturn. The chief manufactures of the mills are cotton twist and yarn, gunny bags and cloths, sugar, paper, silk, ice, shell-lac and lac-dye. The presses press and bale jute for export. Indigo, which is the chief manufacture of the district of Nadia, showed a good outturn during the year, the quantity manufactured being 6,519 maunds, valued at Rs. 12,67,980, as against 2,338 maunds of the value of Rs. 4,07,478 produced during the preceding year. In Jessore the principal manufactures are indigo and date-sugar. The outturn and value of both these articles of manufacture were better than those of the previous year, as shewn below:—

		1890-91.		1891-92.	
		Quantity.	Value.	Quantity.	Value.
		Mds.	Ra.	Mds.	Ra.
Indigo	...	858	1,40,052	3,099	5,05,026
Sugar	...	6,45,533	18,59,588	4,31,131	27,89,508

In Khulna there has been a decrease in the quantity of both sugar and molasses, which are the main industries of the district. In Murshidabad the silk filatures were further reduced by five during the year, and there has similarly been a falling off in the outturn and value of indigo produced in the district.

There is very little of what may be called as manufacturing work in the Division. The year was exceptionally favourable for indigo cultivation. The mulberry crop in

Rajshahi Division.

Rajshahi was, however, a failure, the outturn of silk thus falling off from 89,994lbs. during the preceding year to 44,146lbs. in the year under notice. Molasses are manufactured in all the districts of the Division, the export in 1891 amounting to 57,490 maunds. In Darjeeling 38,934 gallons of beer and porter were brewed for the Military Department. The production of tea in the Division has been separately noticed. There are no mines in the Division in working

order. The question of granting mining leases for coal to Messrs. Octavius Steel and Company was settled during the year.

There are no mines in the Division but heavy black iron-stone here and there. There are no large manufactures and none worth noticing.

Dacca Division.

Indigo was at one time manufactured in Faridpur on an extensive scale. It is now confined only to the Goalundo subdivision, and is declining and will, it is feared, eventually die out entirely. The outturn of this article, however, increased from 65 maunds in 1890-91 to 126 maunds during the year under report. The manufactures of muslins, cheeses, brass, ironware and other articles still continue to exist, but all of them are in a declining state.

Eight sea-going vessels, brigs and sloops were built during the year. The quantity of rice milled was 1,78,810 maunds, against 1,42,818 maunds of the preceding year. There are

Chittagong Division.

no mines in the Division.

Omitting opium and other exciseable articles, the two principal manufactures in the Division are indigo and saltpetre.

Patna Division.

The weather was exceptionally favourable during the year for the former, the outturn being 83,600 maunds, of the value of Rs. 1,50,48,000, against 49,900 maunds, of the value of Rs. 99,80,000, of the preceding year. The yield of refined saltpetre during the year was 2,68,447 maunds. The yield from the mica mines at Gaya was a good deal less than in previous years, but the industry gives employment to an increasing number of work-people. The yield from the Kallianpur gold mine in Patna has been nil during the year.

Indigo is grown in every district of the Division, and the outturn in the Sonthal Parganas was large, the quantity manufactured in the Sahibganj factory being rather more

Bhāgalpur Division.

than double that of the previous year. The silk industry in Malda suffered for want of rain which affected the mulberry plants. The *tassar* in Bhāgalpur is said to show signs of revival. The Madankata coal mine in Deoghar is still being worked, but the output has considerably diminished, and the mine is probably approaching exhaustion.

Orissa Division.

There are no mines in the Division, and, with the exception of salt, no manufactures, properly so called, of any importance.

The tea industry shows a marked decrease both in the number of gardens, which declined from 36 in 1890-91 to 29 in the following year, and in the outturn, which declined

Chota Nagpur Division.

from 520,084lbs. to 468,892lbs. With regard to this it is stated as follows:—
“The gardens here have in a great measure lost the only advantages they ever possessed, viz., cheap and abundant labour, and soil and climate do not appear to be suitable, the former being not sufficiently rich nor deep, and the latter being too dry and uncertain.”

The manufacture of lac, which has hitherto formed an important article of commerce in the Lohardaga and Manbhum districts, seems to be also on the decline, the figures of value manufactured, shown for the year 1891-92, being only Rs. 1,59,200, against Rs. 4,01,088 in 1889-90, and Rs. 4,60,194 in 1890-91. On the other hand, the value of *tassar* silk manufactured from the cocoons produced in the Manbhum and Hazáribágh districts rose from Rs. 42,160 in 1889-90 and Rs. 44,100 in 1890-91 to Rs. 62,440 in the year under report.

Mining operations have not been in a flourishing condition during the year, with the exception of the coal mines situated in the Giridi and Gobindpur subdivisions, and perhaps, also, of the mica mines in Hazáribágh. The Baraganda Copper Mining Company in Hazáribágh became insolvent during the year, while no striking results have yet been obtained in any of the gold operations. The Nowdiha Syndicate is still boring for silver and lead in the Hazáribágh district, and a tin mining company has started work in Gadi Palganj in the same district, but with no results so far. “Altogether,” the Commissioner reports, “the mineral industries of the Division have during the year been suffering from the re-action which was bound to follow the extravagant expectations of 1890.”

Trade.

SEA-BORNE TRADE OF BENGAL.

THE following statement compares the total value of the import and export trade of the Bengal Presidency in the last five years, exclusive of Government transactions:—

	1887-88.		1889-90.		1890-91.		1891-92.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Imports—							
Foreign trade	24,58,21,406	27,11,87,243	26,31,48,038	29,99,87,664	28,70,68,479		
Coasting trade	5,51,30,914	5,39,60,225	5,25,04,528	5,81,40,426	5,61,79,375		
Total of imports	30,09,51,420	32,51,37,468	31,56,52,561	35,81,28,090	34,32,47,854		
Exports—							
Foreign trade	37,19,63,663	37,87,54,789	39,80,60,197	37,43,82,290	40,21,88,052		
Coasting trade	8,77,03,872	7,78,21,397	7,76,18,542	9,01,91,147	10,43,04,513		
Total of exports	46,96,68,935	45,65,76,186	47,56,78,979	46,45,73,437	50,64,92,565		
GRAND TOTAL	76,96,20,355	78,17,13,654	79,12,31,540	82,26,41,523	84,97,40,419		

The total value of imports shows a decrease of Rs. 1,49,20,236, as compared with an increase of Rs. 4,25,15,529 in 1890-91, attributed chiefly to smaller importations of cotton goods. On the other hand, the year under review shows an increase of Rs. 4,20,19,122 under exports, against a decrease of Rs. 1,11,05,536 in 1890-91. This increase was due, under Indian produce, to heavy shipments of tea, linseed, wheat, indigo, and rice, and under 'Treasure' to heavy despatches of gold to the United Kingdom during the time of low exchange and of silver to Ceylon. The decrease in the imports of treasure is the result of smaller receipts of gold from the United Kingdom and Australia, and of silver from the Straits Settlements. Taking imports and exports together, the total value of the trade increased by Rs. 2,70,98,886 over the figures for 1890-91.

SEA-BORNE AND INLAND TRADE OF CALCUTTA.

As usual, the bulk of the trade was carried on with the United Kingdom, which absorbed nearly three-fifths of the entire trade of Calcutta. China occupies the next place. The trade with China as well as with the United States, which stands third in importance, shows a decline, the percentages being 10·2 and 5·89, against 10·69 and 6·63, respectively, in the previous year. The decrease in the trade with China is ascribed to the decline in the shipments of opium and cotton to Hongkong, and of opium to the Treaty Ports, and with the United States to smaller imports of kerosine oil, and the decline in the exportation of linseed oil. The trade with Germany continues to advance, the percentage having risen from 4·08 to 4·50, owing to larger shipments of raw hides and oil-seeds and the revival of the wheat trade. France regained its position after a depression in the two preceding years, and transactions with Belgium expanded owing to direct steamer communication carried on during the last three years.

The total value of the trade of Calcutta *via* the Suez Canal shows an increase of Rs. 3,94,48,060 over the figures of the preceding year, which were the highest recorded since the opening of the canal. The increase was almost entirely confined to exports.

The following table shows the value of the principal articles of
IMPORTS. merchandise imported during the last two years:—

	1890-91.	1891-92.
	Rs.	Rs.
Cotton goods (including twist and yarn)	14,57,75,345	13,55,20,480
Metals	2,36,10,461	2,44,88,028
Mineral oils	1,25,55,206	1,34,49,052
Machinery	81,27,985	82,63,844
Woollen goods	75,10,294	63,84,025
Sugar	61,90,073	47,30,967
Salt	59,21,724	49,53,116
Liquors	47,88,915	44,90,858
Hardware	32,41,100	34,44,091

The following statement gives the value of the principal articles of Indian
EXPORTS. produce and manufacture exported in 1890-91 and 1891-92:—

	1890-91.	1891-92.
	Rs.	Rs.
Raw jute	6,44,78,477	6,08,27,524
Opium	5,97,99,265	6,01,47,915
Tea	5,63,78,662	5,63,31,095
Oil-seeds	3,46,22,681	4,13,45,725
Rice	3,13,06,827	3,26,87,662
Indigo	2,05,11,354	2,63,60,394
Hides and skins	2,07,04,763	2,25,72,638
Wheat	50,37,082	2,11,85,172
Raw cotton	87,28,419	50,85,638

A further improvement is visible in the total value of imports and exports
Coasting trade of Calcutta. in the coasting trade of Calcutta during the year under review. The increase, amounting to Rs. 66,17,432, occurred wholly in exports, the imports having fallen by Rs. 9,97,414. The increase and the decrease were both in Indian produce.

The inland traffic of Calcutta is registered as it enters or leaves the town
Trade of Calcutta with the interior. by rail, by inland steamer, by country-boats, and by road. The result of the past year's registration is shown below, as compared with the trade of the previous year:—

SPECIFICATION OF ROUTES.	IMPORTS.		EXPORTS *		TOTAL.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
1	2	3	4	5	6	7
BY COUNTRY BOAT—	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
1890-91	9,46,58,891	12,26,39,541	76,16,622	3,04,88,988	4,32,74,413	15,30,28,629
1891-92	3,44,36,286	13,01,18,073	80,71,148	3,25,29,126	4,25,06,409	16,26,47,199
BY INLAND STEAMER—						
1890-91	87,95,816	5,98,24,894	28,73,038	2,58,21,317	1,16,68,863	8,48,46,211
1891-92	97,15,987	6,50,90,243	39,71,965	2,65,13,812	1,37,87,932	9,16,04,053
BY E. I. RAILWAY—						
1890-91	4,20,20,243	12,73,77,838	1,10,75,970	16,13,95,491	5,40,06,212	33,87,73,299
1891-92	4,90,86,308	19,44,57,404	1,11,49,865	14,57,15,761	6,02,36,574	34,01,83,242
BY K. B. STATE RAILWAY—						
1890-91	1,28,65,135	6,78,07,962	40,66,570	6,84,92,651	1,69,31,700	13,63,00,613
1891-92	1,18,97,787	8,34,28,585	43,39,504	6,13,54,418	1,62,37,291	14,47,28,003
BY ROAD—						
1890-91	57,46,179	2,75,35,950	29,37,774	1,26,46,849	86,83,944	4,01,82,793
1891-92	54,70,418	2,93,76,039	28,59,099	1,23,65,739	83,29,515	4,23,41,769
TOTAL—						
1890-91	10,40,95,249	45,45,86,185	2,85,88,871	29,85,45,266	13,36,84,123	75,31,31,451
1891-92	11,06,06,341	50,24,76,401	2,94,91,377	37,90,78,867	14,00,96,721	78,15,54,268

As regards the fluctuations in the principal staples, the following table gives for the past two years statistics of the import trade of Calcutta with each

Revenue Division in the Lower Provinces and with other provinces in India as a whole:—

ARTICLES.	IMPORTS INTO CALCUTTA FROM—												
	Burdwan Division.	Presidency Division.	Rajshahi Division.	Dacca Division.	Chittagong Division.	Patna Division.	Bhagalpur Division.	Orissa Division.	Chota Nagpur Division.	Total of Provinces under the Lieutenant-Governor of Bengal.	Other provinces in India.	Grand total of traffic by inland routes.	Percentage borne by supplies from the Lower Provinces to the total imports.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
COTTON, RAW — { 1890-91 { 1891-92	Mds. 3,773 5,024	Mds. 17,840 9,353	Mds. 4,257 6,123	Mds. 29,040 31,679	Mds. 19,320 5,220	Mds. 1,724 681	Mds. 998 892	Mds.	Mds. 24 66	Mds. 40,044 74,349	Mds. 5,29,730 2,59,020	Mds. 6,29,752 3,31,257	Per cent. 97.4 92.00
LENSCO — { 1890-91 { 1891-92	Mds. 9,680 995	Mds. 9,910 15,768	Mds. 1,242 2,100	Mds. 40 129	Mds.	Mds. 31,918 61,268	Mds. 9,491 12,380	Mds.	Mds. 161 104	Mds. 71,013 1,13,902	Mds. 24,240 39,921	Mds. 1,00,820 1,43,020	70.54 74.01
JUTE, RAW — { 1890-91 { 1891-92	Mds. 5,75,136 5,32,184	Mds. 24,12,724 21,38,171	Mds. 22,94,183 26,91,214	Mds. 91,41,072 61,15,042	Mds. 56,724 1,340	Mds. 6,196 11,231	Mds. 1,96,070 2,65,582	Mds. 15,163 8,240	Mds. 205 69	Mds. 1,81,73,970 1,47,28,977	Mds. 1,14,280 81,270	Mds. 24,90,218 15,40,145	99.70 99.45
GUNNY BAGS — { 1890-91 { 1891-92	Mds. 1,11,415 1,54,314	Mds. 1,35,095 2,58,536	Mds. 4,50,430 3,75,451	Mds. 775 2,892	Mds.	Mds. 3,531 1,150	Mds. 2,094 1,002	Mds. 177 95	Mds. 661 319	Mds. 4,92,000 7,41,859	Mds. 1,407 2,540	Mds. 6,40,149 7,81,650	99.53 99.71
WHEAT — { 1890-91 { 1891-92	Mds. 1,10,523 1,44,891	Mds. 2,04,008 5,55,760	Mds. 22,750 16,129	Mds. 26,830 41,000	Mds. 200 874	Mds. 4,48,031 8,30,179	Mds. 11,48,843 14,50,042	Mds. 221 84	Mds.	Mds. 24,27,264 34,28,846	Mds. 13,00,256 41,96,070	Mds. 31,28,408 84,46,321	99.94 99.90
GRAM FLOUR, AND — { 1890-91 { 1891-92	Mds. 1,95,820 1,74,792	Mds. 11,50,401 14,30,619	Mds. 78,947 1,72,707	Mds. 35,000 2,01,569	Mds. 2,074 4,962	Mds. 7,90,351 6,90,374	Mds. 6,79,840 1,01,850	Mds. 10,135 4,820	Mds. 6,291 4,791	Mds. 24,71,095 30,27,799	Mds. 6,49,065 9,10,374	Mds. 24,09,105 42,00,853	99.94 99.11
RICE — { 1890-91 { 1891-92	Mds. 73,41,749 70,45,747	Mds. 27,25,161 27,96,012	Mds. 6,44,755 6,88,869	Mds. 70,41,340 59,67,739	Mds. 2,17,073 8,72,440	Mds. 4,264 5,100	Mds. 75,708 88,069	Mds. 46,761 23,216	Mds. 49,475 29,892	Mds. 1,51,09,218 1,06,05,290	Mds. 5,708 2,79,824	Mds. 1,61,21,977 1,57,02,008	99.95 99.94
PALEOY — { 1890-91 { 1891-92	Mds. 7,45,151 7,92,306	Mds. 2,75,091 9,14,201	Mds. 170 1,750	Mds. 9,142 21,203	Mds. 3,700 9,000	Mds. 482 184	Mds.	Mds.	Mds.	Mds. 10,26,400 12,51,261	Mds. ... 290	Mds. 10,26,400 12,51,261	100.00 100.00
OTHER FOOD GRAINS, — { 1890-91 { 1891-92	Mds. 9,120 11,840	Mds. 22,079 44,463	Mds. 2,418 3,540	Mds. 240 404	Mds.	Mds. 3,45,696 5,21,601	Mds. 1,29,340 4,102,031	Mds.	Mds. 80 ...	Mds. 4,13,010 4,91,117	Mds. 21,905 62,463	Mds. 4,35,012 5,14,170	99.98 99.98
HIDES OF CATTLE. — { 1890-91 { 1891-92	Mds. 44,214 42,239	Mds. 10,761 45,321	Mds. 45,518 15,800	Mds. 1,37,110 1,15,200	Mds. 200 ...	Mds. 1,09,183 1,02,500	Mds. 60,447 86,074	Mds. 2,007 2,365	Mds. 13,907 12,621	Mds. 6,11,274 3,97,919	Mds. 1,14,080 1,20,978	Mds. 6,25,354 5,18,897	91.95 71.41
SALTPETRE — { 1890-91 { 1891-92	Mds.	Mds.	Mds. ... 240	Mds.	Mds.	Mds. 4,04,775 2,01,748	Mds. 5,490 10,008	Mds.	Mds.	Mds. 4,11,287 4,04,128	Mds. 2,39,744 2,64,000	Mds. 6,51,032 6,68,128	91.29 92.04
LINSEED — { 1890-91 { 1891-92	Mds. 5,67,790 9,20,822	Mds. 5,57,908 9,04,454	Mds. 69,311 65,758	Mds. 87,891 69,852	Mds. 29,061 14,702	Mds. 72,18,800 39,07,533	Mds. 6,08,419 8,15,729	Mds. 1,844 300	Mds. 10,914 16,694	Mds. 40,00,257 62,08,467	Mds. 23,16,225 27,90,299	Mds. 71,81,495 82,52,485	99.91 93.79
MUSTARD — { 1890-91 { 1891-92	Mds. 40,515 12,682	Mds. 68,757 7,16,160	Mds. 1,44,321 1,72,040	Mds. 7,12,479 9,16,532	Mds. 1,760 4,012	Mds. 5,12,123 4,08,235	Mds. 3,21,541 4,36,642	Mds. 4,529 907	Mds. 14,392 3,226	Mds. 15,12,047 10,01,191	Mds. 9,24,501 11,28,016	Mds. 21,86,725 28,19,486	91.99 89.69
WAX, RAW — { 1890-91 { 1891-92	Mds. 7,135 6,021	Mds. 7,152 7,364	Mds. 3,586 5,043	Mds. 90 90	Mds.	Mds. 97 75	Mds. 1,605 2,812	Mds.	Mds. 1,339 13	Mds. 21,060 21,995	Mds. 2,215 1,803	Mds. 23,275 23,798	91.72 92.35
BENGL. GUM, — { 1890-91 { 1891-92	Mds. 10,640 6,257	Mds. 97,937 99,302	Mds. 740 ...	Mds. 460 ...	Mds.	Mds. 9,772 9,540	Mds. 641 198	Mds.	Mds.	Mds. 1,20,546 1,14,719	Mds. 2,942 4,629	Mds. 1,23,488 1,19,348	90.17 90.12
BENGL. GUMS, — { 1890-91 { 1891-92	Mds. 5,10,640 5,10,340	Mds. 5,68,241 6,30,245	Mds. 141 740	Mds. 5,103 2,670	Mds. 466 2,740	Mds. 1,08,748 94,130	Mds. 1,381 1,545	Mds. 13 ...	Mds. 46 82	Mds. 8,82,179 9,46,158	Mds. 21,062 15,410	Mds. 9,03,241 9,61,568	97.10 90.39
TEA, INDIA — { 1890-91 { 1891-92	Mds.	Mds.	Mds. 5,91,620 5,91,620	Mds. 5,916 5,759	Mds.	Mds. 179 87	Mds. 234 1,049	Mds.	Mds.	Mds. 5,07,005 5,45,174	Mds. 9,47,390 10,58,077	Mds. 10,21,190 12,76,200	25.19 26.33
TOBACCO — { 1890-91 { 1891-92	Mds. 1,84,800 1,10,568	Mds. 67,654 70,736	Mds. 2,10,541 2,10,000	Mds. 4,320 364	Mds.	Mds. 10,089 37,708	Mds. 27,498 40,465	Mds. 164 391	Mds. 7 64	Mds. 4,90,389 5,06,774	Mds. 491 19,657	Mds. 4,91,410 6,10,491	99.91 91.89
TOTAL — { 1890-91 { 1891-92	Mds. 10,13,705 10,10,516	Mds. 45,65,401 51,12,717	Mds. 58,13,820 77,22,322	Mds. 1,27,22,190 1,27,82,249	Mds. 5,50,200 4,21,415	Mds. 10,31,633 62,79,082	Mds. 31,18,297 37,37,518	Mds. 1,26,165 1,15,081	Mds. 9,003 76,518	Mds. 5,10,20,600 5,01,58,303	Mds. 71,91,712 21,91,949	Mds. 5,82,12,312 6,23,50,252	97.53 92.04

These articles alone comprised 56.74 per cent. of the entire import traffic of Calcutta during 1891-92, against 54.84 per cent. in the previous year.

Concerning the export traffic, similar details in respect of cotton goods and salt during those years are given below:—

ARTICLES.	EXPORTS FROM CALCUTTA TO—												
	Burdwan Division.	Presidency Division.	Rajshahi Division.	Dacca Division.	Chittagong Division.	Patna Division.	Bhagalpur Division.	Orissa Division.	Chota Nagpur Division.	Total of Provinces under the Lieutenant-Governor of Bengal.	Other provinces in India.	Grand total of traffic by inland routes.	Percentage borne by supplies to the Lower Provinces to the total exports.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
COTTON, TWIST AND YARN (HONGKONG). — { 1890-91 { 1891-92	Mds. 14,773 45,495	Mds. 32,680 48,674	Mds. 15,861 22,280	Mds. 59,693 15,130	Mds. ... 200	Mds. 4,117 5,320	Mds. 4,140 5,261	Mds. 60 18	Mds. 1,237 960	Mds. 1,54,015 1,79,900	Mds. 84,284 91,043	Mds. 2,16,302 2,71,002	Per cent. 32.74 35.53
COTTON PIECES (EUROPEAN). — { 1890-91 { 1891-92	Mds. 1,13,490 1,44,360	Mds. 1,38,071 1,51,048	Mds. 2,07,227 2,87,269	Mds. 2,36,093 2,60,000	Mds. 314 10	Mds. 4,17,637 4,19,517	Mds. 1,91,429 1,71,518	Mds. 40 11	Mds. 21,180 37,602	Mds. 14,37,013 14,37,463	Mds. 7,67,715 8,54,074	Mds. 22,04,727 21,91,537	45.08 45.73
SALT — { 1890-91 { 1891-92	Mds. 9,11,511 6,07,734	Mds. 8,19,091 5,00,000	Mds. 12,41,000 12,10,000	Mds. 25,01,754 11,10,000	Mds. 1,62,770 1,50,000	Mds. 16,45,452 12,30,240	Mds. 16,00,000 9,60,122	Mds. 40,179 30,000	Mds. 2,73,005 1,43,200	Mds. 74,13,145 76,81,005	Mds. 8,48,521 8,41,021	Mds. 82,61,666 86,22,026	99.73 100.00
TOTAL — { 1890-91 { 1891-92	Mds. 15,28,774 14,25,255	Mds. 19,13,771 18,49,655	Mds. 25,17,047 25,22,280	Mds. 25,70,786 27,16,124	Mds. 1,64,084 1,61,200	Mds. 20,65,439 21,60,981	Mds. 15,01,140 11,41,705	Mds. 40,219 30,011	Mds. 3,18,123 4,61,773	Mds. 29,84,793 29,00,716	Mds. 16,54,002 17,69,106	Mds. 1,01,61,465 1,03,61,120	99.64 92.03

Transactions in the three articles specified in the foregoing statement made up 37·17 per cent. of the entire exports from Calcutta during the year under report, against 37·28 per cent. in the year before.

The traffic of Calcutta in raw cotton during 1891-92, as compared with the figures of the previous year, is shown below:—

COTTON, RAW.

		1890-91.	1891-92.
		Mds.	Mds.
Imports	...	8,90,490	6,65,894
Exports	...	5,06,325	1,97,338

Owing to unfavourable weather in the provinces where this staple is grown, there was again a small crop in 1891, which accounts for the large decrease shown above. The abstract below shows the places of supply, province by province, during the past two years:—

		1890-91.	1891-92.
		Mds.	Mds.
From Bombay	...	1,94,166	2,32,628
„ North-Western Provinces and Oudh	...	4,36,202	2,01,025
„ Bengal	...	86,182	1,26,565
„ Madras	...	16,793	30,704
„ Burma	...	28,692	17,748
„ Berar	...	...	16,458
„ Assam	...	10,158	13,370
„ Rajputana	...	78,253	11,026
„ Panjab	...	33,065	8,514
„ Other places	...	6,689	7,856
Total	...	8,90,490	6,65,894

The subjoined statement shows the destination of the quantity shipped from Calcutta by sea during the past two years:—

		1890-91.		1891-92.	
		Cwt.	Mds.	Cwt.	Mds.
To Foreign ports—					
United Kingdom	...	55,337	75,306	26,931	36,656
Other ports	...	300,107	4,08,479	100,153	1,36,319
Total	...	355,434	4,83,785	127,084	1,72,975
To Indian ports—					
Bombay and other ports	...	1,263	1,719	5,767	7,850
GRAND TOTAL	...	356,697	4,85,504	132,851	1,80,825

The heavy falling off in the sea-borne exports was due to a poor crop in this country, and to the unfavourable condition of the Home market, where very low prices ruled owing to the enormous cotton crop of America. The absence of demand in Europe for Bengal cotton is ascribed to the Bombay mills having destroyed the trade which the Lancashire mills had in the spinning of coarse yarns and the weaving of coarse goods for India, and consequently the consumption of the short-stapled cotton in the United Kingdom is fast shrinking, the shipments from this country being now insignificant. Among other foreign ports, there were heavy decreases in shipments to Germany, Austria, France, Italy, and China. These decreases were not made up by larger exports from the western side of India.

The gross import and export traffic of Calcutta in cotton twist and yarn during the past two years, was as follows:—

		1890-91.			1891-92.		
		European. Mds.	Indian. Mds.	Total. Mds.	European. Mds.	Indian. Mds.	Total. Mds.
Imports	...	1,70,087	2,90,414	4,60,501	1,64,996	3,19,377	4,84,373
Exports	...	2,29,436	3,34,112	5,63,548	2,67,760	3,03,707	5,71,467

The quantity imported by sea relates to the total clearances from shipboard and from bond for consumption. The following table gives an abstract of the imports of European twist and yarn from each port separately during the past two years:—

WHENCE IMPORTED.	1890-91.		1891-92.	
1	2	3	4	5
From Foreign ports—	lbs.	Mds.	lbs.	Mds.
United Kingdom	13,392,482	1,62,765	12,831,767	1,55,941
Other Foreign ports	508,860	6,185	639,000	7,766
Total of Foreign Trade	13,901,332	1,68,940	13,470,767	1,63,707
Total of Interportal Trade	81,475	747	88,220	1,072
GRAND TOTAL	13,982,807	1,69,687	13,558,987	1,64,779

The sea imports of Indian cotton twist and yarn represent for the most part the production of the mills in Bombay, while the supplies carried by the other routes were derived from the local mills in the vicinity of Calcutta.

The quantities of European twist and yarn exported from Calcutta by internal routes and by sea during the past two years, were distributed as follows:—

Exports by internal routes.

		1890-91.	1891-92.
		Mds.	Mds.
Into Bengal	...	1,46,275	1,68,441
„ North-Western Provinces and Oudh	...	37,399	36,338
„ Assam	...	10,943	16,731
„ Bihar	...	8,996	10,411
„ Panjab	...	6,456	7,133
„ Central Provinces	...	2,315	3,099
„ Rajputana and Central India	...	1,687	1,357
„ Other Provinces	...	1,361	1,055
Total	...	2,15,332	2,44,565

Exports by Sea.

		1890-91.		1891-92.	
		lbs.	Mds.	lbs.	Mds.
To Orissa	...	465,600	5,658	1,143,800	13,894
„ Madras	...	148,390	1,804	98,940	1,203
„ Burma	...	466,873	5,674	612,768	7,447
„ Chittagong	...	58,800	716	38,250	465
„ Other Indian ports	...	4,740	58	400	5
„ Foreign ports	...	16,088	195	14,920	181
Total	...	1,160,491	14,104	1,908,578	23,196

In the following statement the total quantity of Indian cotton twist and yarn exported by internal routes during the past two years is distributed according to the different trade blocks to which the supplies were carried:—

Trade blocks		1890-91.	1891-92.
		Mds.	Mds.
Bihār	...	75,745	84,897
Chota Nagpur	...	24,209	25,938
Bengal	...	20,328	26,566
North-Western Provinces and Oudh	...	8,369	9,170
Central Provinces	...	322	7,873
Assam	...	9,058	5,684
Panjab	...	377	372
Other places	...	249	190
Total		1,43,257	1,60,690

The destination of the sea-borne exports during the past two years was as follows:—

Whither Exported	1890-91.		1891-92.	
1	2	3	4	5
	lbs.	Mds.	lbs.	Mds.
To Indian ports—				
Burma	2,763,598	33,536	2,362,509	29,711
Orissa	5,269,800	64,043	5,049,600	61,294
Chittagong	5,000	61	9,260	113
Madras	1,367,416	16,498	1,637,297	19,897
Other Indian ports	61,000	741	87,100	451
Total of Coasting Trade	9,466,814	1,14,837	9,089,766	1,10,466
To Foreign ports—				
Other Foreign ports	6,247,800	75,928	2,760,830	33,551
Total of Foreign Trade	6,247,800	75,928	2,760,830	33,551
GRAND TOTAL	15,714,614	1,90,865	11,850,596	1,44,017

The following statement gives the total value of European cotton piece-goods imported into, and exported from, Calcutta during the past year, as compared with the totals of

COTTON PIECE-GOODS.
the preceding year:—

		1890-91.	1891-92.
		Rs.	Rs.
Imports	...	13,46,78,733	12,53,88,545
Exports	...	15,86,55,048	13,25,32,842

These figures represent declared values in all cases, with the exception, however, of piece-goods carried by railway and by inland steamers, in which cases they are registered by weight only. In the case of imports by rail, the value of these goods has been calculated according to the value rates of the different exporting provinces. Under the other heads, values have been calculated at the rate of Rs. 68 per maund, which has been taken to represent the average value of a maund of European piece-goods of all sorts in Bengal.

The sea imports represent the total clearances from shipboard and from bond for consumption. The sources of supply during the past two years were as follows:—

FROM	Imports by sea.	
	1890-91.	1891-92.
	Rs.	Rs.
Foreign ports—		
United Kingdom ...	13,36,84,182	12,42,42,242
Other Foreign ports ...	5,01,764	3,91,074
Total of Foreign trade ...	13,41,85,946	12,46,33,316
Indian ports—		
Bombay ...	2,24,758	4,24,591
Madras ...	20,963	21,030
Burma ...	1,07,528	1,79,245
Other Indian ports ...	1,125	1,909
Total of Interportal trade ...	3,54,374	6,26,835
GRAND TOTAL ...	13,45,40,320	12,52,60,151

The Customs report shows that in Calcutta the trade in cotton piece-goods during the past year was an unfortunate one for importers. A constant fall in the value of raw cotton, with a corresponding decline in the manufactured article, and the low rates of exchange, had a most disastrous effect on merchants who buy their goods in anticipation of the market.

The export trade of the past year showed a heavy decline. The partial failure of the crops, with a corresponding higher price for food-grains, militated against a full distribution of this class of goods. The following abstract shows in detail the different provinces to which piece-goods were exported from Calcutta during the past two years:—

	Exports from Calcutta.	
	1890-91.	1891-92.
	Rs.	Rs.
To Bengal ...	5,55,65,516	4,56,92,653
" Bihar ...	4,28,58,130	3,04,09,182
" North-Western Provinces and Oudh ...	3,45,67,120	3,18,33,246
" Panjab ...	81,04,400	90,69,132
" Assam ...	84,12,800	72,21,388
" Burma ...	31,81,330	23,89,419
" Chota Nagpur ...	28,80,500	19,91,452
" Central Provinces ...	4,88,390	12,94,180
" Rajputana ...	7,45,080	7,44,858
" Orissa ...	8,36,703	701,137
" Madras ...	5,83,997	5,40,976
" Foreign ports ...	2,71,459	3,75,325
" Bombay ...	95,421	1,42,643
" Other places ...	63,142	67,351
Total ...	15,86,55,048	13,25,32,842

After adding 25 per cent. to the total clearances on account of under-statement of values, insurance, landing charges, &c., &c., the total imports during the past year by all routes would be raised to Rs. 15,67,03,583. The value of piece-goods exported amounts to Rs. 13,25,32,842. The surplus of imports over exports, therefore, amounted in value to Rs. 2,41,70,741, against Rs. 96,58,765 worth in 1890-91.

The following statement shows the total value of Indian piece-goods carried to and from Calcutta during the past two years:—

	1890-91.	1891-92.
	Rs.	Rs.
Imports ...	52,57,824	39,85,305
Exports ...	11,13,356	5,62,681

The falling off occurred principally in the imports from Bombay, which no doubt were overdone last year.

In the following statement the trade of Calcutta in indigo during the past year is compared below with the trade of the preceding year:—

INDIGO.		1890-91.	1891-92.
		Mds.	Mds.
Imports	...	1,00,592	1,44,033
Exports	...	99,518	1,36,826

There has been a great recovery in this trade. According to the Customs return, the price of indigo averaged Rs. 197 per Indian maund, against Rs. 216 in 1890-91. The quality of the crop was generally up to the average, but the falling off in the price is believed to be due to the large outturn of the year's crop. The chief sources from which indigo was despatched to Calcutta during the past two years, were as follows:—

		1890-91.	1891-92.
		Mds.	Mds.
Bihār	...	61,259	93,723
North-Western Provinces and Oudh	...	28,703	30,882
Bengal	...	10,211	19,176
Other places	...	419	252
Total		1,00,692	1,44,033

The following statement gives details of the total quantity of raw jute brought to and carried from Calcutta by all routes during the past two years:—

		1890-91.	1891-92.
		Mds.	Mds.
Imports	...	1,89,98,817	1,49,68,774
Exports	...	1,46,13,678	1,05,05,398

The falling off in the import trade has been very large. Owing to the low prices of the previous year, there was a considerably less area under jute cultivation, and, with unfavourable weather at certain times during the past year, the result has been the smallest crop seen for many years. At the same time prices have been the highest ever known, being at the close of the year double those at the beginning. The subjoined table shows the chief sources of supply, and the proportion borne by the quantity carried by rail to the total trade, in respect of all the principal jute-producing districts:—

Names of supplying districts.	Total quantity exported in 1891-92.	Fluctuations as compared with 1890-91.		Percentage of total imports into Calcutta carried by rail.
		Increase.	Decrease.	
	Mds.	Mds.	Mds.	
Pabna ...	35,13,776	...	1,22,204	37.03
Dacca ...	32,44,687	...	8,93,687	17.89
Faridpur ...	25,08,793	...	13,58,240	77.41
24-Parganas ...	10,73,239	12,332	...	0.46
Rangpur ...	10,62,499	...	2,88,217	85.72
Hooghly ...	5,13,007	...	56,869	...
Nadia ...	5,09,331	...	1,80,329	83.82
Rajahahi ...	4,14,510	...	1,55,979	53.64
Jalpaiguri ...	4,01,341	...	43,389	100.00
Mymensingh ...	3,03,463	...	7,93,832	17.28
Khulna ...	2,28,936	30,229	...	83.16
Jessore ...	1,70,193	...	2,74,211	42.45
Murshidabad ...	1,57,040	99,290	...	50.42
Dinajpur ...	1,46,211	11,848	...	52.59
Purnea ...	1,44,472	73,026	...	85.03
Bogra ...	1,09,734	...	13,402	96.20
Other places ...	4,77,477	...	70,609	19.97
	1,49,68,774	2,20,425	42,50,468	43.93
Net decrease			40,30,043	

The supply exported by sea during the past two years, was destined as follows:—

		1890-91.		1891-92.	
		Cwts.	Mds.	Cwts.	Mds.
To Foreign ports	...	10,606,145	1,44,36,142	7,593,799	1,03,36,004
„ Indian „	...	26,899	36,612	19,466	26,495
Total	...	10,633,044	1,44,72,754	7,613,265	1,03,62,499

Following on a short crop, the exports to all countries except Australia declined. To the United Kingdom the decline was 19 per cent., to Austria 53 per cent., to Germany 33½ per cent., and to the United States 46½ per cent. France, Italy, and Spain also received smaller quantities.

The imports and exports of gunny bags into and from Calcutta during the past two years, were as follows:—

GUNNY BAGS.

			1890-91.	1891-92.
			No.	No.
Imports	...	...	24,431,978	27,801,109
Exports	...	...	171,300,114	200,194,838

The great divergence in the figures between imports and exports represents part of the outturn of the mills in Calcutta and the suburbs, which does not fall within the scope of registration. The districts which despatched gunnies in large quantities to Calcutta during the past two years, are shown below:—

Districts.	1890-91.			1891-92.		
	Power-loom.	Hand-made.	Total.	Power-loom.	Hand-made.	Total.
1	2	3	4	5	6	7
	No.	No.	No.	No.	No.	No.
Pabna	7,910,660	...	7,910,660	8,420,810	...	8,420,810
Hooghly	3,218,921	521,318	3,740,239	4,531,327	2,072,896	6,604,223
24-Parganas	4,430,367	193,696	4,630,063	6,236,334	772,616	7,007,954
Dinajpur	...	1,877,575	1,877,575	...	1,690,150	1,690,150
Jalpaiguri	...	3,171,735	3,171,735	...	1,868,725	1,868,725
Darjeeling	...	1,201,935	1,201,935	...	832,125	832,125
Rangpur	...	886,200	886,200	...	400,610	400,610
Burdwan	...	149,963	149,963	...	143,992	143,992
Purnea	...	48,260	48,260	...	40,778	40,778
Other districts	...	503,602	503,602	...	471,596	471,596
Total	15,585,949	8,554,272	24,120,220	19,187,281	8,240,479	27,427,760

The large increase in the exports was due chiefly to the greater demands for bags required by the coast ports. The supply exported by sea during the past two years, was distributed as follows:—

	1890-91.			1891-92.		
	Power-loom.	Hand-loom.	Total.	Power-loom.	Hand-loom.	Total.
1	2	3	4	5	6	7
	No.	No.	No.	No.	No.	No.
To Indian ports	49,841,506	5,198,550	55,040,056	58,953,160	3,033,604	61,986,764
To Foreign „	95,607,129	1,105,800	96,712,929	102,875,126	933,100	103,808,226
Total	145,448,635	6,304,350	151,752,985	161,828,286	3,966,704	165,794,990

The traffic of Calcutta in gunny cloth during 1891-92, as compared with the figures of the previous year, is shown below according to the routes followed by the trade :—

			1890-91.	1891-92.
			Pieces.	Pieces.
Imports	...	...	38,465	23,743
Exports	...	...	2,602	2,704

The total quantity of the sea-borne trade of Calcutta in this article during the past two years, was as follows :—

			1890-91.	1891-92.
			Yds.	Yds.
Imports	...	...	81,209	5,210
Exports	...	...	34,559,803	41,554,562

As regards the imports by internal routes, the total trade of the past year comprised 4,903 pieces of power-loom manufacture and 18,840 hand-made pieces. The statement below gives the destination of the sea-borne exports during the past two years :—

	1890-91.			1891-92.		
	Power-loom.	Hand-loom.	Total.	Power-loom.	Hand-loom.	Total.
1	2	3	4	5	6	7
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
To Indian ports	4,720,687	167,400	4,888,087	4,327,562	54,460	4,382,022
„ Foreign „	29,671,716	...	29,671,716	37,172,560	...	37,172,560
Total	34,392,403	167,400	34,559,803	41,600,112	54,460	41,554,562

In addition to the registered supplies detailed above, the consignments of power-loom gunny cloth sent up-country direct from the neighbouring mills without passing the Port Commissioners' wharves, but intercepted at the toll stations on the Nadia rivers, were as follows :—

Importing Districts.	Total of District.	
	1890-91.	1891-92.
	Pieces.	Pieces.
Darbhanga	33,000	94,816
Monghyr	24,375	42,000
Bhagalpur	24,258	32,530
Murshidabad	14,300	5,300
Purnea	8,600	4,950
Muzaffarpur	...	31,600
Rajshahi	...	2,200
Other districts	400	5,600
Total	104,933	218,996

The number of jute mills worked by steam in the vicinity of Calcutta during the past year was 24, against 23 in 1890-91. The quantity of jute worked up in 1891-92 was 62,65,093 maunds, against 47,15,495 maunds in 1890-91.

The wheat trade of Calcutta during the past year is compared below with the figures of the preceding year :—

			1890-91.	1891-92.
			Mds.	Mds.
Imports	...	...	34,69,665	81,47,580
Exports	...	...	20,00,837	66,44,259

Throughout the year there was an exceptionally brisk demand in Calcutta for export to London and the Continental ports, and hence the large increase shown above. In the following statement the total imports into Calcutta from the different provinces are arranged according to the volume of trade :—

	1890-91.	1891-92.
	Mds.	Mds.
North-Western Provinces and Oudh ...	11,42,290	48,65,807
Bihār ...	15,91,533	22,80,420
Bengal ...	4,84,798	7,69,340
Panjab ...	1,96,203	1,74,100
Central Provinces ...	53,236	67,913
Other places ...	2,605	...
Total	34,69,665	81,47,580

Under the influence of the higher prices in the home market, supplies were largely attracted from the Calcutta market. The subjoined statement shows the destination of the quantities shipped from Calcutta by sea during the past two years :—

	1890-91.	1891-92.
	Cwts. Mds.	Cwts. Mds.
To Foreign ports ...	1,340,126 18,24,060	4,746,938 64,61,180
„ Indian „ ...	47,433 64,562	58,113 79,098
Total ...	1,387,559 18,88,622	4,805,051 65,40,208

Under this heading are included *matar* (*pisum arvense*), *khesdri* (*lathyrus sativus*), *masuri* (*eryum lens*), *māskalai* (*phaseolus mungo*, variety *radiatus*), *mung* (*phaseolus mungo*, varieties green gram and *aurens*), *bāt* or *chhola* (*cicer arietinum*), *arhar* (*cajanus indicus*). The gross weight of the Calcutta trade in these grains during the past year, as compared with the figures of the previous year, was as follows :—

	1890-91.	1891-92.
	Mds.	Mds.
Imports ...	35,41,961	43,51,638
Exports ...	15,75,757	22,53,007

There was a great demand for these cereals both for local consumption and for export, which stimulated the import traffic considerably. The following statement shows the places of supply, province by province, during the past two years :—

	1890-91.	1891-92.
	Mds.	Mds.
From Bengal ...	14,12,371	19,33,374
„ Bihār ...	14,33,431	13,84,203
„ North-Western Provinces and Oudh ...	4,77,207	5,40,584
„ Central Provinces ...	44,657	2,70,644
„ Madras ...	62,931	53,251
„ Panjab ...	18,987	33,022
„ Other places ...	92,377	1,36,560
Total	35,41,961	43,51,638

The total quantity of gram and pulse exported by sea during the past two years, was distributed as follows :—

	1890-91.	1891-92.
	Cwts. Mds.	Cwts. Mds.
To Foreign ports	322,242 4,38,607	732,958 9,97,637
„ Indian „	288,223 3,92,303	408,943 5,56,617
Total	610,465 8,30,910	1,141,901 15,54,254

Last year a large quantity of gram was shipped for Mauritius, and it is stated that owing to regular communication by steamer, this trade, which for a couple of years had been diverted, has now reverted to Calcutta. The coasting trade also was on a very much larger scale than in the previous year.

The result of the registration of the trade of Calcutta in rice and paddy during the past two years, is shown below :—

SPECIFICATION OF ROUTES.				IMPORTS.		EXPORTS.	
				1890-91.	1891-92.	1890-91.	1891-92.
1				2	3	4	5
				Mds.	Mds.	Mds.	Mds.
By boat ...	...	{ Rice ...	...	98,27,665	1,19,73,010	2,16,707	2,49,830
		{ Paddy ...	...	7,20,001	8,81,980	2,84,968	3,25,041
„ Inland steamer ...	...	{ Rice ...	...	4,40,866	6,22,961	33,617	44,976
		{ Paddy ...	...	6,084	9,836	2,136	1,322
„ East Indian Railway ...	...	{ Rice ...	...	37,96,767	32,60,819	12,671	14,786
		{ Paddy ...	...	3,26,792	3,19,286	4,723	5,643
„ Eastern Bengal State Railway ...	...	{ Rice ...	...	4,08,343	5,64,339	52,682	43,096
		{ Paddy ...	...	913	3,208	16,330	4,985
„ Road ...	...	{ Rice ...	...	7,01,436	7,46,786	1,78,047	1,78,329
		{ Paddy ...	...	42,679	41,269	2,10,176	2,16,444
„ Sea ...	...	{ Rice ...	...	8,79,198	6,59,953	1,35,04,336	1,40,72,662
		{ Paddy ...	...	1,56,629	1,00,489	90,887	73,695
Total		{ Rice ...	...	1,60,54,176	1,78,17,868	1,39,91,829	1,46,98,608
		{ Paddy ...	...	12,61,948	13,66,068	5,94,220	6,37,130
Grand total in rice after converting paddy into rice, at the rate of 26 seers of rice to a maund of paddy.				1,68,36,643	1,86,66,410	1,43,63,217	1,49,90,664

Notwithstanding the indifferent crops during the past year and the consequent rise in price, there was a brisk demand for export, owing to a scarcity in Upper Burma and a famine in Madras, and large quantities of rice were consequently sent to Calcutta from almost all sources of supply. These causes account for the considerable increase in the import traffic under this head.

The following comparative statement shows the sources of supply, province by province, together with the routes taken by the trade, during the past two years :—

PROVINCES.	By boat and road.		By rail and steamer.		Total.	
	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.
1	2	3	4	5	6	7
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
From Bengal ...	1,06,83,035	1,31,51,303	48,03,366	34,16,777	1,56,96,891	1,74,70,389
„ Central Provinces ...	—	—	—	2,90,906	—	2,90,906
„ Orissa ...	79,123	71,040	9,11,612	7,64,731	9,90,735	7,76,771
„ Assam ...	3,160	47,121	345	3,400	3,495	80,691
„ Bihar ...	22,680	24,943	47,361	10,468	75,907	35,033
„ Chota Nagpur ...	—	—	46,474	39,493	46,474	39,493
„ North-Western Provinces and Oudh ...	1,333	1,466	684	1,376	1,977	4,090
„ Burma ...	—	—	16,308	1,369	16,908	1,369
„ Madras ...	—	—	59	14	59	14
„ Other places ...	—	—	1,305	761	1,305	761
Total ...	1,16,86,677	1,38,06,833	68,50,663	53,68,390	1,68,56,643	1,86,66,410

The chief feature of interest in the foregoing statement is the heavy increase in the imports of rice from the Central Provinces—a circumstance which never occurred in any previous year.

The greater bulk of the export trade was sea-borne, and its destination was as follows:—

Exports of Rice from Calcutta by Sea.

WHITHER EXPORTED.	1890-91.		1890-91.	
	Mds.	Cwts.	Mds.	Cwts.
To Indian ports, viz.—				
Madras ...	47,273	34,731	11,36,511	834,988
Other ports in Madras ...	18,64,217	1,369,629	15,02,659	1,108,994
Bombay ...	17,73,911	1,303,281	12,66,793	930,705
Burma ...	62,389	45,837	2,11,900	155,682
Other ports ...	1,38,331	101,631	1,67,372	122,967
Total of Interportal trade	38,86,121	2,855,109	42,85,235	3,148,336
To Foreign ports, viz.—				
United Kingdom ...	14,28,554	1,049,550	18,34,730	1,347,965
Other foreign ports ...	81,89,660	6,016,893	79,52,697	5,842,798
Total of Foreign trade ...	96,18,214	7,066,443	97,87,427	7,190,763
GRAND TOTAL OF EXPORTS BY SEA ...	1,35,04,335	9,921,552	1,40,72,662	10,339,099

Exports of Paddy from Calcutta by Sea.

	Mds.	Cwts.	Mds.	Cwts.
To Indian ports ...	42,654	31,338	34,055	25,020
„ Foreign „ ...	54,233	39,845	39,640	29,123
TOTAL EXPORTS BY SEA	96,887	71,183	73,695	54,143

The cause of the large increase in the exports of rice to coast ports has already been explained above. The fluctuations in the export trade with “other foreign ports” are an increase in the shipments to Cape Colony, the West Indies, the Straits Settlements and Ceylon, against decreases to Mauritius, Réunion, South America, Aden, Arabia, and Australia. The Customs Report shows that the rice trade in Europe was for a considerable period of 1891-92 devoid of any special features; prices remained on about the same level for some time when some unusual increase in consumption in several districts caused an advance in value, and the higher prices evidently drew larger supplies from Bengal.

The principal staples comprised under this head are barley, *kodo*, *shama*, Indian-corn, oats, millets, and other crops which are reaped during the spring and rainy seasons.

The following statement shows the total trade of Calcutta in these grains registered during the past two years:—

	1890-91.	1891-92.
	Mds.	Mds.
Imports ...	4,37,614	5,15,205
Exports ...	1,45,549	1,70,831

Last year, large supplies of cheap food-grains were consigned to Calcutta, where there was a demand, both for local consumption and for export. The

total quantity brought to Calcutta from each province is shown in the subjoined statement :—

	1890-91.	1891-92.
	Mds.	Mds.
Bihár	3,76,039	4,02,031
Bengal	38,561	59,386
Panjab	18,378	23,467
North-Western Provinces and Oudh	3,497	9,391
Other places	2,139	20,930
Total	4,37,614	5,15,205

The details of the sea-borne exports during the past two years, are given in the following statement :—

	1890-91.		1891-92.	
	Cwts.	Mds.	Cwts.	Mds.
To Foreign ports ...	87,202	1,18,692	90,072	1,22,598
„ Indian „ ...	17,888	24,348	32,305	43,971
Total	105,090	1,43,040	1,22,377	1,66,569

The subjoined statement shows the trade of Calcutta in hides during the past year, as compared with the totals of the previous year :—

HIDES.	1890-91.	1891-92.
	No.	No.
Imports	5,387,165	4,831,534
Exports	6,538,761	6,351,938

There was throughout the year a good demand for all the supplies sent forward, and prices generally were higher. The abstract below shows the different provinces from which the hide supply was derived during the past two years :—

	1890-91.	1891-92.
	No.	No.
Bengal	2,320,895	2,117,941
Bihár	1,731,454	1,027,180
North-Western Provinces and Oudh	834,704	943,352
Orissa	233,639	251,468
Panjab	106,976	294,976
Chota Nagpur	87,786	102,576
Madras	42,915	49,770
Central Provinces	10,336	27,866
Burma	8,642	6,472
Other places	9,868	9,943
Total	5,387,165	4,831,534

The destination of the sea-borne exports during the past two years, was as follows :—

	1890-91.		1891-92.	
	No.	Cwts.	No.	Cwts.
To Foreign ports—				
United Kingdom	2,806,451	181,486	1,596,702	112,656
Other ports	3,664,901	266,806	4,707,519	341,776
Total	6,471,352	448,292	6,304,221	454,432
To Indian ports	16,720	767	5,992	312
GRAND TOTAL	6,488,072	449,059	6,310,213	454,744

The large decline to the United Kingdom is attributable to a diversion of shipments from the United Kingdom to Germany direct. The shipments to this latter country advanced by 73½ per cent. Germany is said to be now the largest consumer of hides shipped from India.

The import and export trade of Calcutta in salt during the past year, as compared with the totals of the previous year, is given below:—

YEARS.	IMPORTS INTO CALCUTTA BY SEA.			EXPORTS FROM CALCUTTA AND HOOGHLY.							
	From Foreign ports.	From Indian ports.	Total.	Inland exports.						Exports by sea.	GRAND TOTAL.
				By the East Indian Railway.	By the Eastern Bengal State Railway.	By inland steamer.	By boat.	By road.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
1890-91	80,33,448	6,03,019	86,37,467	33,89,380	19,50,978	8,41,330	29,37,036	87,767	82,01,490	2,29,102	84,20,592
1891-92	81,42,677	6,83,910	88,26,586	34,36,320	13,43,040	8,83,283	28,24,028	66,913	84,24,391	2,31,552	86,55,943

The above figures show a decrease in the imports, but a rise in the exports. Owing to the falling off in imports, the stocks in bond were largely drawn upon, and, at the close of the year, were reduced to 13,73,061 maunds, against 22,46,432 maunds at the close of 1890-91. The sea-borne supply of salt into Calcutta during the past two years was derived from the following sources:—

		Quantities in tons.		Quantities in Indian maund	
		1890-91.	1891-92.	1890-91.	1891-92.
Liverpool	...	230,886	193,917	62,85,240	52,78,849
Aden	...	36,397	32,321	9,90,807	8,79,841
Hamburg	...	21,908	60,822	6,78,042	16,55,709
Arabian and Persian Gulf	...	24,500	10,991	6,67,104	2,99,208
Bombay	...	20,595	21,714	5,60,643	5,91,103
Madras	...	1,590	1,547	43,276	42,116
Poungies	...	...	2,060	...	56,070
Other ports	...	45	...	12,355	...
Total	...	339,336	323,372	92,37,467	88,02,896

In addition to the above supply, the amount of indigenous salt carried to Calcutta by the East Indian Railway was 375 maunds, against 1,264 maunds in 1890-91. The distribution of the Calcutta supply during the past two years, is classified by provinces in the following statement:—

		1890-91.	1891-92.
		Mds.	Mds.
To Bengal	...	44,55,005	45,06,723
" Bihar	...	26,44,324	26,96,369
" North-Western Provinces and Oudh	...	3,34,044	3,23,457
" Assam	...	5,14,196	5,17,008
" Chota Nagpur	...	2,73,605	3,43,290
" Orissa	...	40,119	36,880
" Other Provinces	...	23	1,161
Total	...	82,01,406	84,24,888
" Sea-ports	...	2,29,102	2,31,552
GRAND TOTAL	...	84,30,508	86,56,440

The quantities of salt on which duty was paid in Calcutta and the 24-Parganas during the past two years, as compared with the inland despatches from Calcutta in those years, are shown as follows:—

	Sea-imported salt.	Excise salt.	Total clearances.	Sent into the interior.
	Mds.	Mds.	Mds.	Mds.
1890-91	92,68,312	Nil	92,68,312	84,90,508
1891-92	95,78,618	Nil	95,78,618	86,56,440

The difference between the two totals shown above would amount to 9,22,178 maunds, against 7,77,804 maunds in 1890-91, as representing the quantity available for consumption in Calcutta, the Suburbs, Hooghly, and a part of the 24-Parganas district.

The gross weight of the Calcutta traffic in saltpetre during the past year, as compared with the figures of the previous year, was as follows:—

SALTPETRE.

		1890-91.	1891-92.
		Mds.	Mds.
Imports	...	6,53,036	6,46,191
Exports	...	5,49,399	5,42,204

The imports were on a level with those of the previous year. The different provinces which contributed to this trade during the last two years, are as follows:—

		1890-91.	1891-92.
		Mds.	Mds.
Bihār	...	4,13,264	4,03,844
North-Western Provinces and Oudh	...	1,76,757	1,84,934
Panjab	...	62,988	75,129
Other places	...	27	284
Total	...	6,53,036	6,46,191

The destination of the total exports by sea during the past two years, was to the following places:—

		1890-91.		1891-92.	
		Cwts.	Mds.	Cwts.	Mds.
To Foreign ports—					
United Kingdom	...	136,357	1,85,597	128,578	1,75,009
Other Foreign ports	...	261,930	3,56,616	257,788	3,50,878
Total	...	398,287	5,42,113	386,366	5,25,887
To Indian ports—					
Madras	...	2,973	4,046	2,799	3,810
Other Indian ports	...	703	957	4,280	5,825
Total	...	3,676	5,003	7,079	9,635
GRAND TOTAL	...	401,963	5,47,116	393,445	5,35,522

The foreign trade was in much the same condition as in 1890-91. The decrease may be attributed to the low prices which ruled throughout the year. Among "other foreign ports" there was a falling off to the United States and China, against increases to France, Mauritius, and to the Straits Settlements.

The total weight of linseed imported into, and exported from, Calcutta during the past year is compared below with the trade of the previous year:—

LINSEED.

		1890-91.	1891-92.
		Mds.	Mds.
Imports	...	71,57,064	82,59,828
Exports	...	68,43,203	81,27,592

At the close of the year high prices prevailed, and the large imports were readily taken up, exchange and low rates of freight being favourable to business. The following are the different provinces from which linseed was imported during the past two years:—

		1890-91.	1891-92.
		Mds.	Mds.
Bihār	...	38,87,928	42,23,056
North-Western Provinces and Oudh	...	18,49,607	25,40,703
Bengal	...	10,33,072	10,28,714
Rajputana and Central India	...	1,47,727	2,05,410
Central Provinces	...	97,096	1,66,789
Assam	...	1,21,797	77,056
Other places	...	19,837	18,098
Total	...	71,57,064	82,59,828

The sea-borne exports during the past two years were distributed as follows :—

	1890-91.		1891-92.	
	Cwts.	Mds.	Cwts.	Mds.
To United Kingdom ...	3,749,422	51,03,380	4,687,771	63,80,577
„ Other Foreign ports ...	1,276,659	17,37,675	1,211,674	16,49,223
Total of Foreign ports ...	5,026,081	68,41,055	5,899,445	80,29,800
To Indian ports ...	1	1	70,995	96,632
GRAND TOTAL ...	5,026,082	68,41,056	5,970,440	81,26,432

The large exports to the United Kingdom are ascribed to a decline in the imports into that country from Russia. Last year there was a remarkable fall in exports to the United States, amounting to 84½ per cent., the figures being the lowest shown for many years. The reason for this is the enormous crop of flax seed in that country during the past year.

The aggregate quantity of mustard seed carried to and from Calcutta during the past two years, was as follows :—

MUSTARD SEED.

	1890-91.	1891-92.
	Mds.	Mds.
Imports ...	24,96,957	28,26,514
Exports ...	12,16,013	16,84,657

The continental crops of rape seed were not good during the past year, and larger imports were therefore necessary to supplement them; hence the increase in the imports shown above. The different provinces which contributed to the import trade during the past two years, are mentioned below :—

	1890-91.	1891-92.
	Mds.	Mds.
Bihár ...	9,16,063	8,39,957
Assam ...	7,58,466	7,76,134
Bengal ...	5,77,033	8,16,987
North-Western Provinces and Oudh	2,06,631	3,74,165
Other places ...	39,704	19,271
Total ...	24,96,957	28,26,514

As regards exports, the largest increase occurred in the quantities shipped from Calcutta by sea, the details whereof during the past two years are given in the subjoined table :—

	1890-91.		1891-92.	
	Cwts.	Mds.	Cwts.	Mds.
To Foreign ports—				
United Kingdom ...	329,022	4,47,835	219,660	2,98,982
Other Foreign ports ...	143,315	1,95,068	471,857	6,42,251
Total ...	472,337	6,42,903	691,517	9,41,233
To Indian ports ...	59,748	81,324	148,603	1,95,460
GRAND TOTAL ...	532,085	7,24,227	836,120	11,36,693

There were large shipments to Belgium and Germany, against a heavy decline to the United Kingdom and a small one to France. Prices at one time ruled high in the Home markets, but large supplies having been sent by India caused a fall in value, the market at the close of the year being depressed.

The registered trade of Calcutta in raw silk during the year 1891-92, as compared with the totals of the previous year, was as follows:—

SILK, RAW.

		1890-91.	1891-92.
		Mds.	Mds.
Imports	...	24,040	23,900
Exports	...	23,447	22,930

In the Calcutta market there was a fall in price, but this was more than recovered at the close of 1891. The quantity of silk shipped from Calcutta by sea during the past two years, was destined as follows:—

		1890-91.		1891-92.	
		lbs.	Mds.	lbs.	Mds.
To Foreign ports—					
United Kingdom	...	388,692	4,724	401,893	4,884
Other Foreign ports	...	1,102,236	13,395	1,060,511	12,888
Total	...	1,490,928	18,119	1,462,404	17,772
To Indian ports—					
Madras	...	260,812	3,170	281,589	3,422
Other ports in Madras	...	16,798	204	13,797	167
Bombay	...	1,232	15	572	7
Burma	...	11,102	135	14,707	179
Other Indian ports	...	1,784	22	1,514	18
Total	...	291,728	3,546	312,179	3,793
GRAND TOTAL	...	1,782,656	21,665	1,774,583	21,565

There were increases to the United Kingdom and to France, but a heavy decline to Italy, where there was a large crop, and prices were consequently low.

The total quantity of the Calcutta trade in sugar during the past year, as compared with the trade of the previous year, is given below:—

SUGAR.

			1890-91.	1891-92.
			Mds.	Mds.
Imports	Refined	...	8,84,658	7,39,929
	Unrefined	...	11,73,798	11,52,041
Exports	Refined	...	4,49,982	3,99,140
	Unrefined	...	4,76,310	4,25,813

The quantities of sugar consigned from the different provinces are shown in the following statement:—

		Refined sugar.		Unrefined sugar.	
		1890-91.	1891-92.	1890-91.	1891-92.
		Mds.	Mds.	Mds.	Mds.
Bengal	...	1,11,443	1,04,539	7,71,026	8,54,393
Bihār	...	10,305	10,191	1,10,470	91,708
North-Western Provinces and Oudh	...	4,832	4,621	23,071	15,136
Madras	...	53,694	59,750	5,685	238
Bombay	...	...	5,878	...	...
Foreign ports	...	...	...	...	1,90,207
Other places	...	7,04,384	6,54,941	2,62,946	369
Total	...	8,84,658	7,39,929	11,73,798	11,52,041

The sea-borne exports during the past two years were distributed as follows:—

	REFINED SUGAR.				UNREFINED SUGAR.			
	1890-91.		1891-92.		1890-91.		1891-92.	
1	2	3	4	5	6	7	8	9
	Mds.	Cwts.	Mds.	Cwts.	Mds.	Cwts.	Mds.	Cwts.
To Foreign ports ...	2,454	1,803	4,049	2,975	574	422	15,127	11,114
„ Indian „ ...	43,187	31,729	62,028	38,225	13,762	10,111	16,707	11,540
Total ...	45,641	33,532	66,077	41,200	14,336	10,533	30,834	22,654

The following statement shows the trade of Calcutta in Indian tea registered during the past two years:—

	1890-91.		1891-92.	
	Mds.	lbs.	Mds.	lbs.
Imports ...	12,44,625	102,414,884	13,88,930	114,289,143
Exports ...	12,85,623	105,788,061	14,55,078	119,732,029

The demand generally throughout the year was for the finer descriptions of tea. A special feature of the trade was the demand for teas for various new outlets, buyers for Bombay and the Colonies occasionally paying higher rates than could be paid by the London market. There was a decline in the average value of teas sold in Calcutta, the rate per lb. being annas 6 and pice 8, against annas 7 in the previous year. The advance in the imports is due to a larger outturn. The following statement shows the provinces from which Indian tea was imported:—

	1890-91.		1891-92.	
	Mds.	lbs.	Mds.	lbs.
Assam ...	9,27,504	76,320,329	10,18,437	83,802,816
Bengal ...	3,01,523	24,811,063	3,48,958	28,714,258
North-Western Provinces and Oudh ...	4,865	400,320	8,684	714,570
Punjab ...	4,849	399,003	5,848	481,207
Chota Nagpur ...	5,452	448,622	5,789	476,352
Bihār ...	403	33,161	1,157	95,205
Other places ...	29	2,386	57	4,735
Total ...	12,44,625	102,414,884	13,88,930	114,289,143

The destination of the total exports during the past two years, was to the following places:—

	1890-91.		1891-92.	
	Mds.	lbs.	Mds.	lbs.
To Foreign ports—				
United Kingdom	12,03,876	99,061,805	13,34,761	109,831,776
Other Foreign ports	65,982	5,429,372	69,913	5,752,849
Total of Foreign ports ...	12,09,858	104,491,177	14,04,674	115,584,615
To Indian ports—				
Bombay	11,450	942,886	45,340	3,730,884
Madras	839	69,028	1,143	93,886
Other Indian ports	920	75,749	1,227	100,967
Total of Indian ports	13,218	1,087,663	47,710	3,925,737
GRAND TOTAL	12,83,076	105,578,840	14,52,384	119,510,352

Regarding the trade with the United Kingdom, it is stated that at the beginning of the year prices in London were fairly good, but they soon gave way, and there was a marked fall. The teas of the new crop which arrived in June were fairly satisfactory, and sold readily, but afterwards the quality fell off, causing prices to decline except for a few China, Assam, and Darjeeling kinds. Heavy auctions followed and caused the price of the commoner kinds to fall to the lowest point ever touched. Concerning the trade with coast ports, one of the most satisfactory features of the year's traffic was the very large expansion in the exports to Bombay, where there was a very strong demand at times for the teas suitable for that market, and high prices were paid. This tea is principally re-shipped to the Persian Gulf.

The total weight of the tobacco trade of Calcutta during the past year is compared below with the figures of the preceding year:—

TOBACCO.

		1890-91.	1891-92.
		Mds.	Mds.
Imports	...	4,98,455	6,38,864
Exports	...	3,45,388	3,91,953

The increase is due to a better outturn in Northern Bengal and Bihār. There was at the same time a good demand for this article, both for local consumption and export. The following statement shows in detail the different provinces from which tobacco was consigned to Calcutta during the past two years:—

		1890-91.	1891-92.
		Mds.	Mds.
Bengal	...	4,34,463	5,21,261
Bihār	...	47,177	78,164
Burma	...	6,060	6,816
Madras	...	4,118	4,995
Orissa	...	958	1,242
North-Western Provinces and Oudh	...	224	18,912
Other places	...	5,455	7,474
Total		4,98,455	6,38,864

The details of the sea-borne exports from Calcutta during the past years were as follows:—

		1890-91.		1891-92.	
		lbs.	Mds.	lbs.	Mds.
To Indian ports—					
Madras	...	141,464	1,719	98,461	1,196
Bombay	...	9,422	116	10,135	123
Burma	...	11,066,458	1,34,488	14,178,492	1,72,211
Other Indian ports	...	2,215,779	26,928	2,096,809	25,483
Total	...	13,433,123	1,63,250	16,375,897	1,99,013
To Foreign ports—					
United Kingdom	...	17,223	210	17,052	131
Other Foreign ports	...	377,532	4,588	710,714	8,637
Total	...	394,754	4,798	727,766	8,868
GRAND TOTAL	...	13,827,877	1,68,048	17,103,663	2,07,881

The large exports to Burma are reported to be due to the failure of the tobacco crop in Upper Burma. Looking to the foreign trade, Mauritius has

again taken the largest quantity, and there was a resumption of exports to Belgium, the shipments to that country being 120,000 lbs. during the year.

The metal trade, which showed a falling off in 1890-91, revived during the year. The imports of galvanized iron, including corrugated-iron roofing, which had shown an advance in the preceding year, suffered a heavy fall in 1891-92, owing, it is supposed, to the large imports in the previous year having been in excess of actual requirements. There have been two marked features in the metal trade—the large importation of Japan copper, and the re-shipment of copper to the United Kingdom.

Notwithstanding the levy of a duty of 6 pies per gallon on mineral oil from February 1888, the trade in this article has continued to expand in a remarkable manner, as will be seen from the following figures:—

MINERAL OIL.

		Gallons.	Rs.
1887-88	...	19,699,334	74,12,509
1888-89	...	20,146,984	85,07,955
1889-90	...	27,419,074	1,18,08,890
1890-91	...	29,694,114	1,25,55,208
1891-92	...	34,874,899	1,34,49,052

The increase in 1891-92 was principally due to greatly enhanced shipments of Russian oil, the prejudice against which article, due, as supposed, to its defective packing, is now disappearing. The imports of Russian oil rose from 2,157,592 gallons, valued at Rs. 8,94,371, in 1890-91 to 10,561,006 gallons, valued at Rs. 38,23,426, in 1891-92, while those from America show a falling off of 3,851,625 gallons.

Under the head of wines and liquors there was a decrease in value of Rs. 43,027 in malt liquors, Rs. 1,90,074 in spirits, and Rs. 64,956 in wines. The only spirit which continues to increase steadily in importation is whisky. The trade in rum is now very small, the total quantity received being only 2,643 gallons.

The imports of malt liquors, spirits, wines, and liqueurs during the past five years, are shown in the following table:—

	Ale, beer, and porter.		Spirits.		Wines and liqueurs.		Total value.
	Gals.	Rs.	Gals.	Rs.	Gals.	Rs.	Rs.
1887-88	717,648	14,47,306	295,032	23,41,402	121,596	11,81,485	49,70,193
1888-89	791,099	15,05,929	330,709	24,77,925	124,771	12,55,486	52,39,340
1889-90	883,412	16,96,843	295,097	19,98,568	124,067	12,04,912	49,00,323
1890-91	732,827	13,94,049	319,844	21,72,683	124,176	12,22,183	47,88,916
1891-92	688,963	13,51,022	291,967	19,82,609	121,236	11,57,227	44,90,858

From these figures it is observed that in the last five years, in spite of the decrease in the value of the rupee, the price per gallon of malt liquors has fallen from Rs. 2-0-3 to Rs. 1-15-4, and of spirits from Rs. 7-14-11 to Rs. 6-12-7, while the value of wines and liqueurs has fallen in a smaller ratio from Rs. 9-11-5 to Rs. 9-8-7. In the case of malt liquors, this is believed to be due to the gradual substitution of light cheap German beers for the stronger and somewhat more costly English liquors; while the reduction of the value of spirits probably means that the quality of the bulk of the imports is inferior. The whisky in particular is said to be cheaper, stronger, and more unwholesome than ordinary country spirit. The continued advance in the demand for this spirit is therefore scarcely a matter for congratulation. Wine, on the other hand, has remained nearly stationary, and has probably not undergone any marked deterioration of quality.

Among other items, it may be observed that the imports of coal, which showed a decline in 1890-91, show a rise of 135½ per cent. in the year under review, though the figures are still below the average of former years. At the same time the use of country coal on board steamers continues to increase, and for this purpose English coal is said to be losing ground.

COAL.

INLAND AND SEA-BORNE TRADE OF CHITTAGONG.

The total quantity of goods of all kinds imported into, and exported from, Chittagong by country-boats registered during 1891-92, is compared below with the figures for the previous year:—

		1890-91.	1891-92.
		Mds.	Mds.
Imports	...	14,06,837	14,71,801
Exports	...	4,13,491	8,03,866
Total		18,19,328	20,75,667

The following comparative statement shows the value of this trade and of the sea-borne trade during the past two years:—

		Imports.	Exports.	Total.
		Ra.	Ra.	Ra.
Inland trade	{ 1890-91 ...	45,96,536	20,00,984	72,57,520
	{ 1891-92 ...	54,65,317	42,24,236	96,89,553
Sea-borne trade	{ 1890-91 ...	1,23,83,091	1,63,89,164	2,87,62,255
	{ 1891-92 ...	1,06,89,379	1,37,25,317	2,43,66,196

The subjoined statement shows in a combined form the total traffic in the principal staples carried to and from Chittagong by country-boats and by sea during the past two years. The chief fluctuations are explained in the following paragraphs:—

NAME OF STAPLE.	IMPORTS INTO CHITTAGONG.						EXPORTS FROM CHITTAGONG.					
	BY COUNTRY-BOATS.		BY CHARTERED AND FOREIGN VESSELS.		TOTAL.		BY COUNTRY-BOATS.		BY CHARTERED AND FOREIGN VESSELS.		TOTAL.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
1	2	3	4	5	6	7	8	9	10	11	12	13
	Mds.	Ra.	Mds.	Ra.	Mds.	Ra.	Mds.	Ra.	Mds.	Ra.	Mds.	Ra.
Wine and Beer—1890-91 1891-92	15,875 7,132	1,446 6,342	13,991 4,413	8,499 3,716	29,866 11,548	13,176 6,214	1,881 12,469	812 6,303	— —	— —	1,881 12,414	812 6,316
Cotton, raw ... { 1890-91 1891-92	29,797 46,773	4,57,576 8,61,000	81 27	715 156	29,878 46,797	4,78,193 8,60,748	16,106 46,719	3,11,159 8,62,801	20,989 52,928	7,60,899 4,61,444	37,494 99,728	5,90,175 12,20,144
Cotton twist and yarn. { 1890-91 1891-92	— —	— —	733 493	58,615 38,343	733 493	58,615 38,343	1,652 2,412	4,13,401 5,40,448	40 73	1,692 2,517	1,692 2,517	1,13,101 5,44,763
Cotton piece-goods. { 1890-91 1891-92	— —	— —	— —	13,66,129 15,45,661	— —	13,66,129 15,45,661	— —	4,01,107 4,08,070	— —	4,297 4,261	— —	4,06,106 6,11,790
Jute, raw ... { 1890-91 1891-92	4,618 4,771	19,473 21,246	25,43,735 13,85,333	57,62,038 89,75,760	23,44,960 12,40,124	52,75,753 89,62,513	390 89	1,738 840	10,69,479 13,89,564	1,01,28,592 79,14,919	10,67,208 13,89,554	1,16,40,139 79,16,283
Gunny bags ... { 1890-91 1891-92	— —	— —	— —	39,410 1,23,370	— —	39,410 1,23,370	— —	— —	— —	11,730 3,269	— —	11,730 3,269
Rice ... { 1890-91 1891-92	8,86,440 6,74,179	15,26,790 10,29,590	4,471 20,457	11,478 46,343	3,99,917 4,65,150	15,48,279 10,45,393	3,319 4,419	3,093 10,460	3,30,144 7,49,127	17,31,297 24,71,791	6,29,454 7,69,587	17,79,146 24,86,371
Indigo ... { 1890-91 1891-92	4,87,514 3,74,618	6,94,073 6,96,743	2,697 7,669	2,433 8,334	4,87,812 3,81,701	6,96,463 8,18,067	— —	— —	1,10,166 8,69,293	2,56,022 6,96,023	1,70,166 8,69,293	2,56,022 4,99,623
Silk and shawl { 1890-91 1891-92	8,671 8,468	1,04,611 97,64,193	83 4	664 499	3,234 4,430	1,06,666 1,68,666	309 3,468	5,653 1,06,341	8,916 7,903	1,01,546 2,41,848	8,116 10,693	1,07,708 3,46,366
Oil ... { 1890-91 1891-92	8,132 7,143	69,040 66,637	1,78,456 1,57,259	4,48,213 4,69,738	1,87,610 2,34,229	5,86,966 6,28,226	11,143 20,263	1,76,166 2,66,768	19,036 8,764	48,491 32,661	29,400 29,663	1,76,491 2,46,813
Metals and man- ufactures of iron etc. { 1890-91 1891-92	14,466 24,664	3,14,738 1,82,159	6,644 6,733	66,713 64,666	20,666 21,777	3,80,466 3,20,776	10,666 24,666	3,76,666 4,46,666	227 366	6,136 8,666	17,666 24,666	5,86,176 4,61,666
Salt ... { 1890-91 1891-92	— —	— —	5,12,673 1,86,679	4,46,668 1,46,668	4,18,673 1,67,679	4,46,668 1,46,668	3,97,667 2,47,668	2,76,668 7,11,668	5,12,677 1,86,669	4,46,677 2,47,130	4,60,664 4,47,132	10,71,668 3,46,130
Mustard and rape { 1890-91 1891-92	10,677 2,638	48,764 16,266	1,334 6,334	13,337 19,337	15,678 21,666	22,331 34,133	1,440 7,739	6,666 7,667	— —	— —	1,440 7,739	3,666 7,667
Spices ... { 1890-91 1891-92	16,166 23,666	3,66,611 3,66,366	1,173 1,169	20,666 21,769	16,666 24,666	1,82,666 3,46,611	16,317 16,313	3,11,411 4,66,710	1,738 12,364	46,666 23,614	24,666 23,667	3,61,666 6,36,367
Sugar ... { 1890-91 1891-92	31,666 46,733	1,66,666 3,66,234	11,366 11,366	1,66,666 1,66,166	43,166 66,666	3,11,666 6,26,666	16,351 23,679	34,667 1,31,178	464 462	1,764 1,660	16,444 74,363	67,666 1,32,666
Tea ... { 1890-91 1891-92	— —	— —	4 4	164 264	4 4	164 264	— —	— —	14,364 16,161	4,67,166 4,12,666	14,364 16,161	5,67,166 6,12,666
Tobacco ... { 1890-91 1891-92	3,166 10,666	66,666 1,76,166	6,666 6,666	166,446 66,413	16,161 22,666	1,66,617 5,12,666	7,671 12,166	61,614 1,16,461	346 266	6,667 8,613	6,667 12,464	68,461 1,26,666

The decrease under this head occurred in the importations from Narayanganj, and is attributable to a limited demand, owing to large accumulation of stocks of the pre-

Lime and limestone.

vious year.

The heavy increase in the cotton trade, both imports and exports, was the result of the unprecedentedly good crop of that staple in the Chittagong Hill Tracts. The consign-

Cotton, raw.

ments to Calcutta showed a considerable rise, namely, 55,006 maunds against 26,263 maunds in 1890-91, but to Narayanganj they showed a falling off of 2,880 maunds during the past year.

There has again been a decrease in the imports of twist and yarn, followed by a larger supply of piece-goods to Chittagong from Calcutta. The figures under

Cotton twist and yarn.

exports, however, show an increase, which indicates that the local demand in the interior of Chittagong was met partly from the stocks of previous years.

Regarding the large increase in the importation of piece-goods from Calcutta, the Administration Report of the Chittagong Division for 1891-92 shows that English

Cotton piece-goods, European.

piece-goods are gradually driving out country-made cloths from the market, but a considerable percentage of the advance was due to clothing for the Military police and transport followers in the South Lushai Hills.

The considerable decline in the jute trade is ascribed to a short crop, and to the destruction by fire of a large quantity of this article at Narayanganj. The destination of

Jute, raw.

the exports by sea during the past two years, was as follows:—

			1890-91.	1891-92.
Quantity	Mds.		18,77,914	12,71,350
Value	Rs.		1,15,40,573	76,10,354

Owing to the scarcity in the Madras Presidency, the trade in rice received a stimulus during the year under report.

Rice and paddy.

The following figures show for the past two years the imports of rice and paddy into Chittagong by country boats:—

			1890-91.	1891-92.
Rice	...	Mds.	5,85,446	6,74,779
Paddy	...	"	4,57,348	3,74,642

The exports of rice from that port to foreign countries during the past two years, were as follows:—

			1890-91.	1891-92.
Rice	...	Cwts.	223,638	275,487
	...	Mds.	3,04,396	3,74,968

The increase was due chiefly to larger shipments to the Mauritius and the West Indies. There were also smaller increases in the consignments to the Maldives, Réunion, and Zanzibar.

According to the coasting trade returns, the quantities of rice and paddy shipped for the different coast ports during the past two years, were as follows:—

			1890-91.			1891-92.
Paddy	...	Cwts.	154,400	Rice	...	231,978
	...	Mds.	2,10,155		...	3,15,748

Last year there were larger shipments to Madras, Cochin, Bombay, and Rangoon.

The increase in this trade was due probably to the prevalence of a cattle epidemic (cattle-pox) during the past year.

Hides and skins.

The decrease in the imports of salt is stated to be due partly to the fact that there was a surplus stock of salt at the commencement of the year out of the previous year's very large importations, and partly to the state of exchange.

The quantity of salt exported from Chittagong by country boats during the past two years, was despatched to the following districts :—

	1890-91.	1891-92.
	Mds.	Mds.
To Chittagong ..	2,10,541	2,12,432
„ Noakhali ..	23,364	23,308
„ Dacca (Narayanganj) ..	...	10,150
„ Other districts ..	3,912	1,756
Total ...	2,37,817	2,47,646

Besides these supplies, the quantity of salt shipped for Narayanganj by sea-going vessels was 1,93,496 maunds, against 2,12,197 maunds in 1890-91.

The increase in the country boat traffic under this head is due chiefly to larger transactions in chillies, both as regards imports and exports. The increase in the exports by coasting vessels is also attributable to the same cause.

The increase in the import sugar traffic was due to greater local demand, chiefly for the purpose of making confectionery.

The details as regards refined and unrefined sugar are given below :—

	1890-91.	1891-92
	Mds.	Mds.
Sugar, refined ...	17,137	25,750
„ unrefined ...	25,964	37,302

There was a small increase in the quantity of tea exported. The quality of the tea manufactured was, however, not considered up to the standard of previous years. The climate of the district, it is said, is becoming too dry for tea, but the change so far cannot be called anything but casual.

SEA-BORNE TRADE OF ORISSA.

The following figures illustrate the trade of the Orissa ports, exclusive of Government transactions, during the last two years :—

Ports.	Imports.			Exports.			GRAND TOTAL.		
	Goods traffic.	Spice.	Total.	Goods traffic.	Spice.	Total.	Goods traffic.	Spice.	Total.
1	2	3	4	5	6	7	8	9	10
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Balasore — { 1890-91 1891-92	14,00,000 74,00,000	100,000 100,000	14,10,000 74,10,000	47,25,371 48,15,227	5,37,000 4,35,000	47,11,330 48,40,127	34,00,330 1,10,00,700	4,70,000 4,17,000	1,01,71,330 1,02,42,330
Cuttack ... { 1890-91 1891-92	1,41,510 30,000	... 1,000	1,41,510 30,000	31,10,000 41,05,000	...	31,17,000 41,05,000	31,00,000 41,05,000	... 1,000	31,00,000 41,06,000
Puri ... { 1890-91 1891-92	5,000 4,000	...	5,000 4,000	5,00,000 5,07,000	...	5,00,000 5,07,000	5,00,000 5,07,000	...	5,00,000 5,07,000
Total ... { 1890-91 1891-92	15,41,510 74,04,000	100,000 100,000	15,41,510 74,04,000	52,75,371 53,22,227	5,37,000 4,35,000	52,60,330 53,57,227	1,01,00,330 1,00,00,700	4,70,000 4,17,000	1,01,71,330 1,02,42,330

There has been a steady improvement in the sea-borne trade of all three ports; the value of the entire trade having risen 23 per cent. over the totals of the previous year.

The following statement shows for the past two years the different directions followed by the trade, both as regards imports and exports:—

	Imports from.		Exports to.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Ra.	Ra.	Ra.	Ra.
Calcutta and other Indian ports	56,13,368	75,31,728	56,09,722	54,78,977
Foreign ports	98,659	6,444	25,50,273	40,83,193
Total	57,12,027	75,38,172	81,59,995	95,62,170

The quantities and values of the important articles of traffic imported into Orissa during the past two years, are given in the subjoined table:—

PRINCIPAL ARTICLES.	QUANTITY.				VALUE.		
	English weight.		Indian weight.		1890-91.	1891-92.	
	1890-91.	1891-92.	1890-91.	1891-92.			
1	2	3	4	5	6	7	
			Mds.	Mds.	Rs.	Rs.	
Cotton twist and yarn	European lbs.	3,306,925	1,411,500	40,189	13,508	14,65,708	8,84,208
	Indian ..	1,408,400	4,769,700	17,116	57,966	4,93,007	17,27,671
Cotton piece-goods	European Rs.	...	...	...	...	5,31,485	6,43,241
	Indian ..	...	...	...	...	7,605	3,792
Other non-intoxicating drugs	"	...	...	...	...	3,19,648	1,51,998
Gunny bags	No.	1,511,143	2,098,000	15,11,143	20,98,000	3,33,636	4,72,169
Metals	Cwts.	16,594	23,098	22,586	31,489	4,02,104	6,47,489
Oils	Gals.	641,303	120,671	53,280	9,283	2,74,523	1,51,061
Ghee	lbs.	29,782	25,900	363	308	10,824	9,395
Spices	"	1,512,783	1,985,423	18,386	23,885	1,81,049	2,68,627
Betel-nuts	"	4,487,294	6,913,486	64,534	71,806	4,11,692	5,51,824
Salt	Cwts.	152,460	...	2,07,515	...	2,23,764	...
Treasure	Rs.	...	...	...	...	90,870	85,500

The following statement shows the quantity and value of the principal staples in the export trade during the past year, as compared with the totals of the previous year:—

PRINCIPAL ARTICLES.	QUANTITY.				VALUE.	
	English weight.		Indian weight.		1890-91.	1891-92.
	1890-91.	1891-92.	1890-91.	1891-92.		
1	2	3	4	5	6	7
			Mds.	Mds.	Rs.	Rs.
Rice ... Cwts.	1,733,307	1,885,250	23,59,319	18,86,479	58,23,976	55,58,986
Paddy ... "	123,811	85,013	1,68,580	1,16,712	1,78,159	1,23,400
Hides ... No.	216,060	256,388	2,16,060	2,56,388	3,77,193	4,56,095
Lac, stick and other kinds ... Cwts.	2,683	5,459	3,653	7,490	39,453	74,742
Oil-seeds ... "	187,074	83,624	1,96,573	1,13,821	5,91,894	3,40,970
Timber and sleepers ... "	11,100	19,051	16,108	27,156	36,392	59,088
Silver (treasure) ... Ra.	...	...	...	...	5,87,986	4,39,893
Jute, raw ... "	44,240	48,554	60,215	66,087	1,40,083	2,24,884

The chief export was rice, and it was largely shipped for Madras and other ports in spite of the high prices which ruled during the year.

Rice and paddy.

COUNTRY BOAT TRAFFIC ON THE NADIA RIVERS.

In the following statement the aggregate weight and value of all kinds of goods carried downwards and upwards by country boats on the Nadia rivers during the past year, are compared with the figures of the previous year:—

	DOWN-STREAM.		UP-STREAM.		TOTAL.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
1890-91 ...	89,04,320	2,38,39,853	23,91,813	79,29,681	92,95,733	3,17,80,334
1891-92 ...	63,38,107	2,49,03,205	28,38,701	1,00,54,780	91,76,808	3,49,57,985

Owing to an obstruction at the entrance of the Mathabhanga river, as stated in last year's report, a portion of the traffic, which would ordinarily have been carried by that route, had to pass through the Jalangi river, which remained open during the dry season, and hence the fluctuations noticed above in the traffic carried along those two rivers. The proportion of the Calcutta traffic to the total trade was 62·17 per cent. in the down traffic, and 24·64 per cent. in the up traffic.

The number of laden boats which passed down and up the Nadia rivers during 1891-92 was 28,000, against 27,377 in the previous year. The principal articles in the down-stream traffic registered during the past two years, are shown below:—

PRINCIPAL STAFFS.	DOWN-STREAM TRAFFIC REGISTERED AT—						PROPORTION OF CALCUTTA TRAFFIC TO THE TOTAL TRADE.		
	Jangipur.*	Nadia.	Kishen-ganj.	Hanskhali.	Total.		Into Calcutta.	Into other places.	Total.
					Quantity.	Value.			
1	2	3	4	5	6	7	8	9	10
	Mds.	Mds.	Mds.	Mds.	Mds.	Rs.	Mds.	Mds.	Mds.
Indigo ...	1890-91 ... 123	123	...	...	123	24,488	80	33	123
	1891-92 ... 40	40	...	...	40	7,600	40	...	40
Jute, raw ...	1890-91 ... 36,781	6,46,605	11,318	3,46,661	10,34,405	32,82,705	8,68,046	2,17,330	10,34,405
	1891-92 ... 73,303	9,09,789	11,439	3,10,220	9,56,333	47,78,165	7,41,724	2,94,109	9,56,333
Wheat ...	1890-91 ... 4,44,303	3,53,771	2,674	33,763	7,04,393	19,86,739	7,00,106	4,106	7,04,393
	1891-92 ... 3,34,911	3,04,104	945	42,455	7,51,475	22,08,010	5,54,209	12,206	7,06,673
Rice not in the husk ...	1890-91 ... 40,986	3,14,817	592	3,23,394	6,79,338	17,83,849	6,13,176	66,582	6,79,338
	1891-92 ... 17,079	6,08,840	...	23,210	6,09,139	17,19,547	3,44,917	34,091	6,09,139
Do. in the husk ...	1890-91 ... 2,619	1,475	10,479	462	14,303	81,849	1,978	19,697	14,303
	1891-92 ... 2,679	2,500	10,547	210	24,836	80,440	1,303	53,313	24,836
Gram and pulses ...	1890-91 ... 2,78,083	4,85,083	19,291	3,36,371	8,03,457	23,08,033	6,40,631	23,300	8,03,457
	1891-92 ... 2,12,030	3,08,276	22,540	3,46,080	7,69,660	14,74,403	7,38,164	34,654	7,69,660
Other spring and rain crops ...	1890-91 ... 1,08,719	3,08,851	330	692	4,10,093	7,18,553	4,69,835	748	4,10,803
	1891-92 ... 67,348	3,04,606	62	2,033	4,45,398	7,78,114	4,19,051	6,307	4,45,398
Linseed ...	1890-91 ... 4,02,999	1,00,477	1,895	77,078	7,39,340	22,46,000	7,39,463	8,754	7,39,340
	1891-92 ... 4,81,090	2,08,117	6,143	22,213	7,37,696	20,81,093	7,34,060	8,837	7,37,696
Mustard and rape seed ...	1890-91 ... 2,77,330	1,84,707	45	40,620	5,08,739	20,73,785	4,38,179	67,641	5,08,739
	1891-92 ... 2,01,057	80,658	...	29,177	3,16,805	13,65,168	2,08,840	40,778	3,16,805
Other oil-seeds ...	1890-91 ... 69,408	4,881	130	134	69,408	5,54,340	63,714	604	69,408
	1891-92 ... 1,31,673	21,092	200	301	1,53,361	5,31,635	1,04,144	1,217	1,53,361
Ghee ...	1890-91 ... 18,095	5,082	...	18	18,790	5,19,690	16,140	250	18,790
	1891-92 ... 13,864	10,378	...	6	23,647	8,29,438	23,034	1,692	23,647
Saltpetre ...	1890-91 ... 1,948	...	...	...	1,948	2,475	1,948	...	1,948
	1891-92 ... 5,267	335	...	...	5,672	36,390	5,192	...	5,672
Other saline substances ...	1890-91 ... 1,22,513	26,289	200	...	1,22,513	6,30,381	1,16,052	2,839	1,22,513
	1891-92 ... 1,23,000	10,269	4,000	100	1,28,010	7,04,274	1,33,099	6,991	1,28,010
Sugar, refined ...	1890-91 ... 2,690	335	...	30	9,010	24,634	6,073	9,048	9,010
	1891-92 ... 12,144	29	...	...	12,164	1,21,640	6,435	6,619	12,164
Do., unrefined ...	1890-91 ... 10,323	890	1,084	6,308	17,130	68,400	5,038	11,492	17,130
	1891-92 ... 4,111	323	916	4,104	10,813	47,309	1,951	8,648	10,813
Milk, raw (Indian) ...	1890-91 ... 1,804	...	...	...	1,804	5,21,351	459	1,050	1,804
	1891-92 ... 1,711	...	...	...	1,711	5,34,087	593	716	1,711
Manufactures of milk (Indian)* ...	1890-91 ... 28,175	...	...	...	...	28,175	...	28,175	28,175
	1891-92 ...	...	...	...	...	...	...	...	...
Hides† ...	1890-91 ...	14,366	...	513	14,366	40,034	14,366	513	14,366
	1891-92 ...	5,788	...	...	5,788	16,467	5,788	...	5,788
Tobacco, unmanufactured ...	1890-91 ... 20,880	1,07,617	369	33	1,36,840	10,76,016	25,439	1,12,300	1,36,840
	1891-92 ... 29,567	1,90,617	4	460	1,40,032	18,60,323	28,386	1,08,824	1,40,032
Timber ...	1890-91 ... 23,212	4,060	...	60	23,212	1,12,751	49,980	6,441	23,212
	1891-92 ... 14,744	5,905	...	...	21,649	43,268	17,566	2,583	21,649

* Manufactures of milk are shown according to value in rupees.

† Hides are shown according to number.

The trade in the principal staples carried upwards during the past two years, is exhibited in the following statement :—

PRINCIPAL STAPLES.	UP-STREAM TRAFFIC REGISTERED AT—						PROPORTION OF CALCUTTA TRAFFIC TO THE TOTAL TRADE.			
	Jangiput.	Nadia.	Kishan-ganj.	Hanskhali.	Total.		From Calcutta.	From other places.	Total.	
					Quantity.	Value.				
1	2	3	4	5	6	7	8	9	10	
	Mds.	Mds.	Mds.	Mds.	Mds.	Rs.	Mds.	Mds.	Mds.	
Coal and coke ...	1890-91	35,348	1,28,373	1,215	36,879	2,08,446	76,282	1,84,328	30,216	2,02,449
	1891-92	40,443	1,37,740	...	17,316	2,41,970	92,580	2,14,140	31,830	2,45,970
Cotton twist and yarn (European) ...	1890-91	...	...	...	60	60	4,173	69	30	69
	1891-92	...	...	...	101	101	3,232	101	...	101
Rice not in the husk ...	1890-91	22,540	87,440	472	20,939	1,91,611	3,48,004	17,416	1,13,005	1,31,011
	1891-92	60,862	93,800	530	10,615	1,73,467	4,08,775	17,130	1,60,357	1,77,487
Do. in the husk ...	1890-91	1,654	65,364	1,04,697	1,37,916	2,80,421	4,04,132	1,68,905	1,80,510	2,89,437
	1891-92	977	67,427	1,37,914	39,734	2,90,110	4,56,193	74,613	3,06,084	3,80,116
Iron and its manufac- tures ...	1890-91	10,643	6,074	6	0,069	21,934	1,44,470	28,168	2,709	18,894
	1891-92	3,308	7,109	...	0,100	16,664	70,164	10,109	564	10,624
Salt ...	1890-91	1,33,278	4,53,005	259	2,45,281	8,32,503	27,07,140	7,53,977	78,208	8,32,503
	1891-92	1,38,512	3,47,342	...	1,80,447	6,70,031	21,00,472	6,03,084	41,247	6,71,031
Cotton piece-goods (European)* ...	1890-91	20,790	...	509	2,400	...	23,090	1,600	21,600	23,600
	1891-92	...	6,800	...	5,400	...	13,200	6,800	6,400	13,200
Gunny bags* ...	1890-91	1,223	1,806	...	3,026	6,037	1,882	4,737	1,309	6,037
	1891-92	800	33,328	...	...	34,132	10,401	33,163	1,600	34,163
Gunny cloth* ...	1890-91	152,609	1,612	...	...	123,473	6,33,513	104,538	18,840	123,573
	1891-92	133,375	100,544	...	...	240,521	15,72,890	219,921	26,890	246,181

* Piece-goods are shown according to value in rupees, gunny bags in number, and gunny cloth in pieces.

TRAFFIC ON THE GANGES, THE BHAGIRATHI, JALANGI, AND THE HOOGHLY RIVERS, AS WELL AS ALONG THE MID-NAPORE CANAL AND THE ORISSA COAST CANAL, CARRIED BY INLAND STEAMERS.

The total quantity and value of goods imported into, and exported from, Calcutta by inland steamers plying on the different routes mentioned above during the past two years, have been as follows :—

	1890-91.		1891-92.	
	Quantity. Mds.	Value. Rs.	Quantity. Mds.	Value. Rs.
Imports ...	15,14,838	1,01,49,472	16,64,530	1,05,04,276
Exports ...	8,84,572	1,07,00,707	10,43,123	1,17,76,465
Total ...	23,99,410	2,08,50,179	27,07,653	2,22,80,741

The principal articles comprising the import and export traffic of Calcutta during the past three years, are exhibited in the following statement:—

List of Articles.	Imports into Calcutta.		List of Articles.	Exports from Calcutta.	
	Quantity.	Value.		Quantity.	Value.
1	2	3	4	5	6
	Mds.	Rs.		Mds.	Rs.
Cotton, raw ... { 1890-91 { 1891-92	731 595	13,702 10,710	Coal and coke ... { 1890-91 { 1891-92	9,770 13,072	3,663 4,902
Cotton piece-goods, { 1890-91 Indian. { 1891-92	4,550 4,739	3,59,850 3,36,469	Twist and yarn, En- { 1890-91 ropean. { 1891-92	18,084 25,356	10,94,063 16,64,309
Indigo ... { 1890-91 { 1891-92	2,284 4,074	4,65,938 7,63,875	Piece-goods, Euro- { 1890-91 pean. { 1891-92	55,587 61,556	38,89,690 48,89,808
Myrabolams ... { 1890-91 { 1891-92	384 22,026	576 33,039	Turmeric ... { 1890-91 { 1891-92	6,985 9,547	47,938 74,764
Jute, raw ... { 1890-91 { 1891-92	20,868 41,181	65,212 2,07,406	Gunny bags ... { 1890-91 { 1891-92	14,721 10,308	1,47,210 1,71,234
Wheat ... { 1890-91 { 1891-92	95,208 54,870	2,08,021 1,57,751	Gram and pulse ... { 1890-91 { 1891-92	9,085 11,002	21,838 27,506
Gram and pulse { 1890-91 { 1891-92	78,089 44,911	1,07,472 11,028	Leather, manufac- { 1890-91 tured. { 1891-92	... 20	... 4,195
Rice in the husk { 1890-91 { 1891-92	6,034 9,599	9,051 15,983	Liquors ... { 1890-91 { 1891-92	2,478 763	1,31,983 34,849
Rice not in the { 1890-91 husk. { 1891-92	4,99,561 6,11,382	11,53,822 17,67,680	Brass and copper... { 1890-91 { 1891-92	42,087 42,115	12,52,106 12,01,841
Hides of cattle ... { 1890-91 { 1891-92	7,785 7,832	1,67,378 1,68,388	Iron ... { 1890-91 { 1891-92	32,454 39,767	1,62,270 1,84,803
Brass and copper { 1890-91 { 1891-92	43,066 44,175	17,68,859 17,22,651	Other metals ... { 1890-91 { 1891-92	13,014 15,043	1,53,158 1,09,234
Provisions, other { 1890-91 kinds. { 1891-92	44,975 24,282	4,27,293 3,25,784	Oils, kerosine ... { 1890-91 { 1891-92	1,15,780 1,61,010	4,34,175 6,81,273
Saltpetre ... { 1890-91 { 1891-92	953 3,440	2,030 21,830	Other oils ... { 1890-91 { 1891-92	19,164 24,662	55,096 2,83,498
Other saline sub- { 1890-91 stances. { 1891-92	3,867 78	21,268 429	Provisions, other { 1890-91 kinds. { 1891-92	21,350 50,693	1,83,909 5,06,768
Linseed ... { 1890-91 { 1891-92	5,55,878 5,81,407	22,23,512 23,98,304	Salt ... { 1890-91 { 1891-92	2,36,962 2,59,809	7,70,127 8,12,080
Mustard seed ... { 1890-91 { 1891-92	52,849 25,179	2,18,003 1,07,011	Mustard seed ... { 1890-91 { 1891-92	9,087 5,237	97,483 22,257
Castor seed ... { 1890-91 { 1891-92	6,437 19,099	25,748 94,450	Other oil-seeds ... { 1890-91 { 1891-92	21,382 23,773	62,049 68,347
Poppy ... { 1890-91 { 1891-92	8,379 4,832	95,606 20,530	Betel-nuts ... { 1890-91 { 1891-92	16,676 15,443	1,29,239 1,12,034
Other oil-seeds ... { 1890-91 { 1891-92	44,328 45,180	1,27,443 1,29,392	Sugar, refined ... { 1890-91 { 1891-92	20,397 24,585	2,13,119 2,45,950
Silk, raw ... { 1890-91 { 1891-92	4,852 5,204	14,82,010 16,26,250	Do., unrefined ... { 1890-91 { 1891-92	16,943 18,032	83,597 81,144
Silk piece-goods, { 1890-91 Indian. { 1891-92	676 87	5,43,375 65,500	Spices, other kinds { 1890-91 { 1891-92	9,249 7,250	1,15,612 90,625
Betel-nuts ... { 1890-91 { 1891-92	29 45	225 326	Tobacco ... { 1890-91 { 1891-92	15,434 17,781	1,19,596 1,68,240
Spices, other kinds { 1890-91 { 1891-92	605 678	8,281 8,475	Wool—manufactur- { 1890-91 ed, Indian. { 1891-92	9 885	197 63,965
Sugar, refined ... { 1890-91 { 1891-92	1,878 7,274	19,719 72,740			

BOAT TRAFFIC ON THE MIDNAPORE AND HIJILI CANALS.

The total country boat traffic registered on the Midnapore and Hijili Canals during the past two years, is shown in the subjoined comparative statement:—

NAMES OF CANALS.	Down.		Up.		Total.	
	Weight of goods registered by weight.	Value of all articles of trade.	Weight of goods registered by weight.	Value of all articles of trade.	Weight of goods registered by weight.	Value of all articles of trade.
1	2	3	4	5	6	7
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Midnapore ... { 1890-91	15,07,748	47,36,706	6,52,816	32,34,412	21,60,564	79,71,118
... { 1891-92	16,03,334	45,09,802	5,66,032	19,96,006	21,69,366	65,05,808
Hijili ... { 1890-91	5,59,171	12,79,934	2,17,022	10,55,188	7,76,193	23,35,022
... { 1891-92	9,79,494	27,01,450	2,26,821	13,52,025	12,06,315	40,56,475
Total ... { 1890-91	20,66,919	60,16,640	8,69,838	43,09,600	29,36,767	1,03,16,140
... { 1891-92	25,82,828	72,11,252	7,92,853	33,48,031	33,75,681	1,05,62,283

Hitherto in the classification of "down" and "up" traffic in the trade returns of the Hijili Canal, all goods passing from Calcutta used to be shown under the former head, and those towards Calcutta under the latter head. In the case, however, of the Midnapore and Orissa Canals, and the Nadia River the practice has been quite the reverse. With the view of adopting one principle applicable to all the canals and navigable rivers, the Public Works Department of this Government have directed that, with effect from the 1st April 1891, all traffic on the Hijili canals if towards Calcutta should, as in the case of the other canals and rivers, be taken as "down," and if from Calcutta as "up" traffic. The necessary alterations have accordingly been made in the returns, and the figures shown in the above statement under the heads "down" and "up" traffic will, therefore, not correspond with those published in the previous reports.

The following statement shows all the principal articles of traffic carried along these canals during the past two years:—

CHIEF ARTICLES OF TRAFFIC.	Registered on the Midnapore Canal.	Registered on the Hijili Canal.	GRAND TOTAL.		PROPORTION OF CALCUTTA TRADE TO THE TOTAL TRAFFIC.	
			Quantity.	Value.	Quantity.	Value.
1	2	3	4	5	6	
	Mds.	Mds.	Mds.	Rs.	Mds.	Rs.
Coal and coke ... { 1890-91	1,07,116	21,845	1,28,961	48,980	1,28,261	48,094
... { 1891-92	91,432	23,130	1,14,562	48,078	1,13,492	42,526
Cotton twist and yarn { 1890-91	13,574	500	14,374	8,09,027	14,374	8,09,627
(European) ... { 1891-92	4,401	50	4,451	2,57,045	4,451	2,57,045
Jute, raw ... { 1890-91	11,555	16,135	26,690	83,406	26,676	80,384
... { 1891-92	30,692	39,104	69,796	3,48,480	61,352	2,06,780
Vegetables, and all kinds { 1890-91	41,476	1,280	42,756	1,92,402	38,508	1,73,286
of fresh fruits ... { 1891-92	16,660	1,184	16,844	75,798	14,719	66,235
Rice in the husk ... { 1890-91	6,95,970	2,79,548	8,75,518	19,13,277	3,54,908	6,32,902
... { 1891-92	6,17,810	2,79,294	8,97,104	14,57,794	3,21,081	521,976

CHIEF ARTICLES OF TRAFFIC.	Registered on the Midnapore Canal.	Registered on the Hijili Canal.	GRAND TOTAL.		PROPORTION OF CAL- CUTTA TRADE TO THE TOTAL TRAFFIC.	
			Quantity.	Value.	Quantity.	Value.
1	2	3	4	5	6	
	Mds.	Mds.	Mds.	Rs.	Mds.	Rs.
Rice not in the husk ... { 1890-91 1891-92	6,68,361 6,55,470	2,50,195 2,50,260	9,18,556 9,05,730	24,11,302 27,53,991	2,84,768 12,02,856	23,23,400 24,58,211
Gram and pulse ... { 1890-91 1891-92	89,778 85,245	... ...	89,778 85,245	2,24,440 2,13,113	89,378 84,916	2,23,440 2,12,288
Copper, unwrought ... { 1890-91 1891-92	3,125 760	... ...	3,125 760	92,188 21,375	3,125 760	92,188 21,375
Brass, " ... { 1890-91 1891-92	6,475 890	... ...	6,475 890	1,45,687 20,025	6,475 880	1,45,687 19,800
Do., wrought ... { 1890-91 1891-92	8,733 2,485	60 84	8,793 2,569	3,62,711 1,00,833	8,733 2,512	3,60,238 98,598
Oil, kerosine ... { 1890-91 1891-92	45,922 48,441	20,720 24,036	75,651 72,477	2,83,691 3,08,027	44,346 31,075	1,66,297 1,44,819
Provisions other than ghee { 1890-91 1891-92	30,791 24,726	214 756	31,005 25,482	2,87,564 2,42,079	30,488 24,738	2,62,656 2,35,011
Salt ... { 1890-91 1891-92	2,28,458 1,95,148	81,383 69,184	3,09,841 2,64,312	10,08,083 8,25,975	3,09,491 2,64,114	10,03,846 8,25,356
Linseed ... { 1890-91 1891-92	8,075 6,035	500 ...	9,175 6,035	36,700 24,894	8,075 5,935	36,300 24,648
Mustard seed ... { 1890-91 1891-92	34,790 28,330	4,005 ...	38,825 28,830	1,50,153 1,22,527	36,825 28,625	1,51,903 1,21,655
Indigo seed ... { 1890-91 1891-92	1,800 4,250	... ...	1,800 4,250	12,375 25,031	1,800 4,250	12,375 25,031
Sugar, unrefined ... { 1890-91 1891-92	53,180 64,195	6,120 3,283	59,300 67,478	2,89,088 3,03,651	57,120 64,132	2,78,460 2,88,594
Tobacco ... { 1890-91 1891-92	12,883 8,206	40,344 75,880	62,227 84,086	4,82,359 7,46,263	59,471 81,738	4,60,900 7,25,424
Timber ... { 1890-91 1891-92	14,252 1,09,479	9,661 12,270	23,913 1,21,768	47,826 2,43,516	6,199 63,535	12,398 1,27,070
Cotton piece-goods (Euro- pean) ... { 1890-91 1891-92	72,000 29,700	1,32,875 1,67,310	... ...	2,04,875 1,97,010	... ...	2,08,875 1,96,900
Cotton piece-goods (In- dian) ... { 1890-91 1891-92	3,05,380 1,09,740	... ...	... ...	3,05,380 1,69,740	... ...	3,04,760 1,09,740
Hides, raw ... { 1890-91 1891-92	11,670 21,520	9,100 15,620	20,770 37,140	55,819 99,814	18,910 37,040	50,552 92,545

BOAT TRAFFIC ON THE ORISSA CANALS.

The total quantity and value of the country boat traffic registered on the Orissa Canals during the past two years, were as follows:—

ORISSA CANALS.	Weight of goods regis- tered by weight.		Value of all articles of trade.	
	1890-91.	1891-92.	1890-91.	1891-92.
1	2	3	4	5
	Mds.	Mds.	Rs.	Rs.
Down traffic ...	14,09,003	15,06,894	43,40,000	45,07,775
Up traffic ...	4,59,944	4,50,484	43,25,801	50,93,680
Total ...	18,68,947	19,63,360	86,65,801	96,01,455

The following statement shows the chief articles of merchandise carried by this route during the past two years:—

NAMES OF ARTICLES.	Quantity.		Value.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Rs.	Rs.
Cotton twist and yarn (European)	25,300	40,200	15,30,650	23,21,550
Turmeric	2,650	2,128	17,887	16,477
Jute, raw	2,350	870	7,344	3,350
Rice in the husk	1,29,695	1,07,602	1,94,892	1,74,853
Do. not in the husk	10,45,754	10,42,814	27,45,104	29,98,000
Gram and pulse	6,767	27,459	18,917	58,643
Oil, kerosine	78,765	47,698	2,95,331	2,02,718
Salt	26,130	29,344	84,922	91,700
Other oil-seeds	2,05,400	1,90,210	5,90,784	5,48,854
Other spices	1,40,353	1,62,441	17,54,375	20,30,513
Sugar, unrefined	20,471	42,206	99,796	1,98,927
Timber	68,797	1,10,398	1,37,594	2,20,706

BOAT TRAFFIC ON THE ORISSA COAST CANAL.

The quantity of merchandise carried by country boats along this route during the past year, as compared with the figures of the previous year, are shown in the following statement:—

		1890-91.		1891-92.	
		Quantity.	Value.	Quantity.	Value.
		Mds.	Rs.	Mds.	Rs.
Down	...	7,39,023	15,86,921	2,49,291	12,40,933
Up	...	3,07,433	14,85,620	6,39,358	15,40,411
Total	...	10,46,456	30,72,541	8,88,649	27,81,344

For the reasons already explained, the figures shown in the foregoing statement have been so compiled as to show all traffic carried towards Calcutta as "down" traffic, and that carried from Calcutta as "up" traffic. The figures published in previous reports will, therefore, not correspond with the revised totals now presented.

The subjoined statement shows all the principal staples of traffic carried by this route during the past two years:—

NAMES OF ARTICLES.	1890-91.				1891-92.			
	DOWNWARD TRAFFIC.		PORTION RELATING TO THE CALCUTTA TRAFFIC.		DOWNWARD TRAFFIC.		PORTION RELATING TO THE CALCUTTA TRAFFIC.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
1	2	3	4	5	6	7	8	9
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Jute, raw	4,685	14,641	4,430	13,844	15,548	70,893	14,046	70,328
Vegetables and all kinds of fresh fruits	10,376	73,858	808	3,890	3,015	9,098	1,440	4,380
Rice not in the husk	2,25,695	5,32,153	2,10,058	5,31,307	2,62,345	7,54,348	2,44,080	7,01,730
Do. in the husk	4,15,737	8,23,531	4,00,427	8,20,855	3,64,805	4,58,590	3,01,578	4,73,778
Til or linseed	4,075	16,300	2,910	11,640	99	390	40	160

NAMES OF ARTICLES.	1890-91.				1891-92.			
	UPWARD TRAFFIC.		PORTION RELATING TO THE CALCUTTA TRAFFIC.		UPWARD TRAFFIC.		PORTION RELATING TO THE CALCUTTA TRAFFIC.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
1	2	3	4	5	6	7	8	9
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Coal and coke	19,393	7,427	18,320	6,881	20,300	7,640	20,320	7,820
Cotton twist and yarn (European)	2,385	1,42,477	2,830	1,42,477	2,140	1,23,845	2,140	1,23,845
Cotton piece-goods (European)	...	2,03,380	...	2,40,000	...	1,08,750	...	1,08,750
Gram and pulse	9,628	34,030	9,230	23,285	3,140	9,850	2,430	6,160
Rice not in the husk	45,654	1,10,894	...	...	17,100	43,103	...	...
Do. in the husk	9,367	14,696	...	...	3,003	4,880	...	...
Oil, kerosine	72,133	2,70,405	67,330	2,70,002	68,570	2,62,528	68,550	2,57,508
Salt	75,934	1,48,748	72,119	1,44,367	67,400	2,19,448	60,650	1,90,100
Sugar, refined	7,848	12,078	1,245	13,078	1,430	14,500	1,430	14,500
Do., unrefined	11,405	55,843	10,005	45,007	2,368	39,000	4,940	21,780
Tobacco	22,310	1,72,703	21,465	1,69,324	18,308	1,69,311	18,300	1,69,300
Beet-nuts	1,870	8,848	1,870	8,848	540	8,815	530	8,848

RIVER-BORNE TRAFFIC CARRIED BY THE RIVER STEAMER COMPANIES.

The total quantity and value of the merchandise carried by the River Steamer Companies along the Brahmaputra and Meghna rivers during the past two years, were as follows:—

SPECIFICATION OF DOWNWARD AND UPWARD TRAFFIC.		ALONG THE BRAHMAPUTRA.		ALONG THE MEGHNA.		TOTAL.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
1		2	3	4	5	6	7
		Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Downward traffic.	{ 1890-91	42,58,130	2,78,34,541	32,56,324	2,23,28,321	75,12,454	5,01,52,862
	{ 1891-92	56,91,198	3,22,42,883	28,43,106	2,23,23,507	85,38,303	5,51,66,370
Upward traffic.	{ 1890-91	15,77,995	1,24,58,618	5,43,173	68,48,379	23,21,168	1,88,02,995
	{ 1891-92	17,12,949	1,30,73,932	7,28,781	51,01,304	34,41,730	1,90,74,696
Total	{ 1890-91	58,34,125	4,02,81,157	38,09,497	2,86,74,600	98,33,622	6,89,56,757
	{ 1891-92	74,04,147	4,62,16,265	35,71,886	2,80,24,711	1,09,76,033	7,42,40,968

The subjoined statement shows all the principal articles of traffic carried by this route during the past two years:—

ARTICLES.	EXTERNAL TRADE OF INDIA.						PROVINCIAL TRADE OF CALCUTTA.						
	Imports into Bengal from Assam.		Exports from Bengal to Assam.		Total.		Downward traffic to Calcutta.		Upward traffic from Calcutta.		Total.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
	1	2	3	4	5	6	8	9	10	11	12	13	
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	
Continuous or India-rubber { 1890-91 1891-92	4,624 5,956	3,81,800 4,31,400	31 13	1,152 1,027	4,645 5,709	5,08,575 4,42,407	...	...	...	...	...	...
Coal and coke { 1890-91 1891-92	15,79,085 20,68,332	10,04,950 18,04,340	1,30,898 2,40,040	67,573 76,849	90,98,233 25,08,278	11,28,338 17,41,670	...	...	14	2,10,364 1,44,373	78,050 61,719	2,10,664 1,64,087	78,901 61,730
Cotton twist and yarn. { 1890-91 European { 1891-92	...	...	10,039 15,324	5,45,719 5,82,074	10,039 15,324	5,45,719 5,82,074	...	...	...	888 325	35,584 13,307	888 325	35,584 13,307
Cotton piece-goods. { 1890-91 European { 1891-92	...	...	83,474 81,350	68,43,130 65,30,838	83,474 81,350	68,43,130 65,30,838	...	...	...	11,000 9,123	3,15,000 4,20,000	11,000 9,123	3,15,000 4,20,000
Jute, raw { 1890-91 1891-92	1,00,323 60,250	2,73,308 3,40,050	253 53	301 205	1,00,323 60,250	2,73,308 3,40,050	36,70,640 40,54,042	1,14,90,300 1,04,10,700	30 80	36,70,640 40,54,042	30 80	36,70,640 40,54,042	36,70,640 40,54,042
Gram and pulses { 1890-91 1891-92	47 1,196	170 3,400	2,35,234 2,25,500	5,27,833 6,68,884	2,35,234 2,25,500	5,27,833 6,68,884	1,301 2,714	3,207 4,200	17,731 5,070	14,300 11,073	10,733 6,734	42,702 18,900	42,702 18,900
Rice not in the husk ... { 1890-91 1891-92	345 2,053	928 10,000	5,05,013 2,90,000	5,46,886 4,01,041	2,00,256 2,90,716	5,46,886 4,01,041	799 8,130	2,547 22,278	100 201	251 759	1,000 3,501	2,549 24,781	2,549 24,781
Stick and other kinds of iron ... { 1890-91 1891-92	9,813 15,039	1,10,330 1,40,300	...	140	9,813 14,039	1,10,330 1,40,300	...	...	...	13	420	13	420
Leather, manufactured { 1890-91 1891-92	...	...	1,301 1,348	3,37,881 3,60,066	1,301 1,348	3,37,881 3,60,066	...	...	...	50 80	18,800 18,668	50 80	18,800 18,668
Lignum { 1890-91 1891-92	7 ...	103 ...	14,354 14,341	4,31,194 4,47,849	14,354 14,341	4,31,194 4,47,849	...	...	...	500 63	34,519 2,565	500 63	34,519 2,565
Brass and copper ... { 1890-91 1891-92	793 683	30,548 41,117	12,000 10,674	4,31,094 3,82,000	12,000 11,287	4,31,094 3,82,000	33 174	1,701 0,507	411 119	14,132 4,437	114 280	17,313 10,609	17,313 10,609
Iron { 1890-91 1891-92	1,297 603	6,463 3,180	1,75,319 1,60,173	5,04,985 4,63,612	1,74,826 1,61,338	5,04,985 4,63,612	177 8	800 29	14,500 10,104	71,020 76,782	14,500 10,104	71,020 76,782	71,020 76,782
Other metals { 1890-91 1891-92	896 883	30,380 29,150	10,187 1,07,818	3,00,854 18,12,053	10,187 1,08,401	3,00,854 18,12,053	...	...	...	3,708 2,000	31,140 25,519	3,708 2,000	31,140 25,519
Oils { 1890-91 1891-92	31 ...	40 ...	1,17,024 1,31,000	0,95,184 7,38,307	1,17,024 1,31,000	0,95,184 7,38,307	...	...	...	2,14,733 2,11,136	8,31,009 9,70,219	2,14,733 2,11,136	8,31,009 9,70,219
All kinds of provisions { 1890-91 1891-92	4,713 3,429	16,419 10,082	74,618 84,101	7,05,140 5,31,464	78,791 87,133	7,21,800 5,38,819	304 1,108	4,044 2,324	13,408 30,179	3,107 3,268	20,500 26,376	20,500 26,376	20,500 26,376
Salt { 1890-91 1891-92	...	...	2,44,301 2,35,613	9,88,020 9,38,478	2,44,301 2,35,613	9,88,020 9,38,478	...	...	...	1,00,000 1,27,800	3,35,000 3,40,000	1,00,000 1,27,800	3,35,000 3,40,000
Linseed { 1890-91 1891-92	68,194 24,401	2,23,874 68,368	28 67	112 336	68,222 24,438	2,23,874 68,404	4,307 1,673	17,000 7,323	...	...	4,307 1,673	17,000 7,323	17,000 7,323
Mustard seed { 1890-91 1891-92	8,80,814 6,28,708	21,77,221 22,01,241	1 ...	4	8,80,814 6,28,708	21,77,221 22,01,241	...	...	40,440 2,43,140	...	...	40,440 2,43,140	40,440 2,43,140
Tea seed { 1890-91 1891-92	1,648 2,665	1,80,003 2,44,734	190 ...	...	1,648 2,665	1,80,003 2,44,734	...	...	...	...	...	...	...
Stk, raw { 1890-91 1891-92	1,424 1,779	1,31,410 2,00,133	10 0	2,038 1,976	1,424 1,779	1,31,410 2,00,133	23 ...	8,443 ...	...	...	...	23 ...	8,443 ...

EXTERNAL TRADE OF BENGAL.

PROVINCIAL TRADE OF CALCUTTA.

ARTICLES.	Imports into Bengal from Assam.		Exports from Bengal to Assam.		Total.		Downward traffic to Calcutta.		Upward traffic from Calcutta.		Total.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	1	2	3	4	5	6	7	8	9	10	11	12
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Silk, manufactured, { 1890-91 Indian ... { 1891-92	221 155	1,73,800 26,000	0 ...	4,800 ...	221 155	1,73,800 26,000	...	...	...	...	...	...
Betal-nuts ... { 1890-91 ... { 1891-92	...	...	2,337 1,743	17,403 12,073	2,337 1,743	17,403 12,073	57,191 15,903	0,73,709 4,75,395	016 9	7,898 60	33,012 62,074	0,02,808 4,75,411
Sugar, refined ... { 1890-91 ... { 1891-92	...	...	27,417 24,293	2,38,090 2,40,000	27,417 24,293	2,38,090 2,40,000	...	...	1,569 674	13,594 0,740	1,569 674	15,834 5,740
Tea, Indian ... { 1890-91 ... { 1891-92	3,80,398 3,13,432	3,25,73,814 2,60,68,244	45 10	1,518 803	3,80,443 3,13,442	3,25,75,332 2,60,69,047	...	...	3 ...	108 ...	3 ...	108 ...
Wool, manufactured, { 1890-91 Indian ... { 1891-92	6 ...	101 ...	1,071 1,368	1,37,816 89,544	1,071 1,368	1,37,816 89,544	...	...	43 7	4,336 427	43 7	4,336 427
Treasure, silver ... { 1890-91 ... { 1891-92	...	...	...	7,05,800 5,23,624	...	7,05,800 5,23,624	...	...	...	...	...	...

**TRAFFIC ON THE BRAHMAPUTRA AND MEGHNA RIVERS
CARRIED BY THE STEAMERS OF THE EASTERN
BENGAL STATE RAILWAY.**

The following comparative statement shows the total quantity and value of goods carried by the steamer service of the Eastern Bengal State Railway during the past two years:—

1	DOWN TRAFFIC.		UP TRAFFIC.		TOTAL.	
	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.
	2	3	4	5	6	7
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Dacca service ...	15,90,569	9,45,652	4,59,520	5,25,448	20,49,089	14,71,100
Sirajganj service ...	18,38,893	18,08,208	3,61,034	3,22,507	21,97,927	19,31,206
Cachar service ...	41,865	1,60,776	74,018	1,14,134	1,16,473	2,84,910
Total { Quantity Mds.	34,69,317	27,04,636	9,15,181	9,62,079	43,83,498	36,67,216
Value— Rs.	1,64,48,270	2,14,18,769	2,29,53,017	2,45,46,340	3,93,99,287	4,59,65,099

The decrease in the quantities carried both ways was 28·90 per cent. as compared with 1890-91. The chief staples of merchandise of which this traffic consisted, were—

Dacca service.

Chief Articles of Downward Traffic.

ARTICLES.	Quantity.		Value.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Rs.	Rs.
Cotton, raw ...	21,497	20,853	4,03,069	3,75,354
Cotton piece-goods, Indian ...	164	431	20,173	30,601
Jute, raw ...	13,74,321	6,71,146	42,94,753	33,55,730
Gram and pulses ...	3,279	13,286	8,198	33,215
Paddy ...	1,176	27,204	1,764	44,207
Hides ...	1,35,632	1,16,973	29,16,088	25,14,920
Skins ...	3,550	2,586	67,897	60,301
Linseed ...	3,964	2,231	15,856	9,203
Mustard and rape seed ...	26,987	42,654	1,11,239	1,81,280
Betal-nuts ...	2,334	1,815	18,089	13,159
Spices, other kinds ...	228	1,628	2,850	19,100
All other articles ...	...	...	1,32,275	2,43,339
Total value ...	...	...	79,99,250	68,90,409

Chief Articles of Upward Traffic.

ARTICLES.	Quantity.		Value.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Rs.	Rs.
Cutch ...	1,028	1,497	16,448	22,455
Twist and yarn, European ...	27,226	27,945	16,47,173	16,13,824
Piece-goods, European ...	1,61,980	1,75,698	1,13,38,600	1,19,47,464
Ditto, Indian ...	457	967	56,211	68,657
Drugs and chemicals ...	1,435	1,437	16,241	24,998
Gunny bags ...	2,445	5,602	24,450	58,821
Gram and pulse ...	14,831	5,029	37,078	12,573
Leather, manufactured ...	1,959	3,032	4,61,345	6,35,962
Liquors ...	2,739	3,786	1,26,559	1,81,031
Brass and copper and their manufactures ...	11,671	9,355	4,34,834	3,22,173
Iron and its manufactures ...	25,019	23,516	1,25,095	1,11,701
Opium ...	85	23	21,339	5,900
Ghee ...	3,198	1,856	1,05,134	65,888
Other kinds of provisions ...	18,476	10,393	1,28,022	98,734
Salt ...	21,853	97,362	71,022	3,04,256
Silk, raw ...	31	17	11,338	5,313
Manufactures of silk ...	102	123	82,110	92,604
Spices ...	7,188	4,303	83,101	53,788
Sugar, unrefined ..	71,221	54,631	3,47,202	2,45,840
Tobacco ...	1,673	4,615	15,410	44,324
All other articles ...	...	...	5,36,999	4,07,378
Total value ...			1,56,85,711	1,63,83,684

The total traffic attracted to this service during the past year showed a decrease of 12·13 per cent. The following statements show the principal articles conveyed during the past two years:—

Sirajganj service.

Chief Articles of Downward Traffic.

ARTICLES.	Quantity.		Value.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Rs.	Rs.
Jute, raw ...	15,77,160	13,31,415	49,28,625	66,57,075
Gunny bags ...	2,27,132	2,40,596	18,17,056	25,26,258
Gram and pulse ...	11,535	115	28,835	288
Hides ...	1,299	335	27,929	7,203
Linseed ...	698	249	2,792	1,027
Mustard seed ...	9,824	21,030	40,524	89,377
Betelnuts ...	117	808	1,372	5,858
Tobacco ...	5,042	7,304	39,076	64,823
All other kinds ...	...	...	24,341	39,246
Total value ...			69,10,550	93,91,155

Chief Articles of Upward Traffic.

ARTICLES.	Quantity.		Value.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Rs.	Rs.
Twist and yarn, European ...	2,314	8,239	1,39,997	1,87,053
Cotton piece-goods, ditto ...	38,753	40,352	27,12,710	27,43,936
Manufactures of leather ...	246	363	57,983	77,188
Liquors ...	344	244	12,827	9,751
Brass and copper and their manufactures ...	3,630	2,642	1,48,791	99,774
Iron and its manufactures ...	20,632	17,318	1,03,160	82,281
Oils ...	25,643	21,833	1,21,511	1,11,998
Salt ...	2,16,319	1,84,322	7,03,037	5,76,006
Spices ...	15,059	2,758	1,44,592	34,475
Sugar, refined ...	2,730	3,667	28,685	36,670
Do., unrefined ...	9,990	9,045	48,701	40,703
All other articles ...	...	...	1,59,527	2,43,259
Total value ...			43,81,551	42,43,074

The traffic of this service is steadily increasing, the total advance in the gross weight of goods conveyed amounting to 127·44 per cent. The abstracts below show the chief staples carried during the past two years :—

Chief Articles of Downward Traffic.

ARTICLES.	Quantity.		Value.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Rs.	Rs.
Brass and copper and their manufactures ...	153	187	6,866	8,509
Tea seed ...	1,174	1,147	97,882	1,00,936
Tea, Indian ...	38,137	1,46,235	13,96,768	49,56,144
All other articles ...	...	...	34,954	71,606
Total value ...			15,36,470	51,37,195

Chief Articles of Upward Traffic.

ARTICLES.	Quantity.		Value.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Rs.	Rs.
Twist and yarn, European ...	258	1,081	15,480	62,428
Cotton piece-goods, ditto ...	35,261	45,258	24,68,270	30,77,544
Drugs and chemicals, not intoxicating ...	818	437	9,342	4,807
Liquors ...	1,152	2,187	29,649	58,188
Leather, manufactured ...	215	1,019	50,633	2,13,735
Brass and copper and their manufactures ...	2,271	3,621	91,027	1,40,145
Iron and its manufactures ...	5,841	13,324	29,295	63,289
Other metals ...	1,284	2,505	14,445	28,181
Provisions, other kinds ...	2,436	4,752	23,244	45,144
Spices, other kinds ...	716	1,319	8,950	16,488
All other articles ...	...	...	1,45,433	2,09,633
Total value ...			28,85,755	39,19,582

TRADE OF BENGAL WITH ASSAM CARRIED BY COUNTRY BOATS.

The total weight and value of the trade of Bengal with Assam carried by country-boats along the Brahmaputra and Meghna rivers during the past two years, were as follows :—

EXTERNAL TRADE OF BENGAL WITH ASSAM.	REGISTERED AT BRAHMAPUTRA ON THE MEGHNA.		REGISTERED AT DHUBRI ON THE BRAHMAPUTRA.		TOTAL.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	1	2	3	4	5	6
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Imports from Assam ... { 1890-91 ...	43,26,440	48,17,842	16,77,198	34,06,312	59,03,638	82,24,154
... { 1891-92 ...	47,34,293	55,69,801	21,72,239	56,75,979	69,06,532	1,12,45,780
Exports to Assam ... { 1890-91 ...	11,48,327	65,32,679	3,53,175	24,19,275	15,01,502	89,50,954
... { 1891-92 ...	12,54,017	69,70,272	6,34,131	35,77,526	18,88,148	1,05,47,598
GRAND TOTAL ... { 1890-91 ...	64,74,767	1,13,50,521	19,30,373	58,24,587	74,06,140	1,71,75,108
... { 1891-92 ...	59,88,310	1,25,40,073	28,06,370	92,53,505	87,94,680	2,17,93,373

The following statement shows the quantity and value of the principal staples registered during the past year, as compared with the preceding year:—

EXPORTS FROM ASSAM.					EXPORTS TO ASSAM.				
Articles.	Bhaishah Bazar.	Dhabet.	Total.	Value.	Articles.	Bhaishah Bazar.	Dhabet.	Total.	Value.
1	2	3	4	5	6	7	8	9	10
				Rs.					Rs.
Lime and limestone Mds. { 1890-91 18,13,423 1891-92 18,30,305	—	—	18,13,423 18,30,305	6,59,825 3,41,504	Cotton twist and yarn (European) Mds. { 1890-91 — 1891-92 104	201 374	201 374	16,083 21,849	
Tea and rebans — " { 1890-91 4,679 1891-92 3,000	0,185 5,019	13,094 11,000	13,094 11,000	59,593 29,525	Cotton piece-goods (European) — " { 1890-91 1,498 1891-92 3,201	98 22	1,002 4,073	1,20,440 2,77,044	
Cotton, raw — " { 1890-91 629 1891-92 4,238	13,313 13,322	13,083 16,090	13,083 16,090	79,042 10,749	Ditto (Indian)... — " { 1890-91 1,608 1891-92 1,533	90 45	1,756 1,400	2,17,898 19,400	
Jute, raw — " { 1890-91 7,713 1891-92 7,696	2,75,495 1,47,548	3,31,355 1,55,383	3,31,355 1,55,383	5,37,029 7,76,723	Turmeric — " { 1890-91 0,712 1891-92 4,450	104 484	8,896 4,894	43,940 37,652	
Potatoes — " { 1890-91 11,406 1891-92 25,773	— 123	11,406 25,791	11,406 25,791	49,784 74,540	Potatoes — " { 1890-91 2,802 1891-92 15,730	3,703 11,000	13,565 27,440	47,078 106,190	
Rice in the husk — " { 1890-91 20,05,823 1891-92 22,60,188	2,75,387 4,29,017	23,81,429 27,04,205	23,81,429 27,04,205	32,55,699 38,42,035	Cocoanuts — " { 1890-91 14,770 1891-92 22,371	7,268 17,371	21,339 47,502	59,374 90,124	
Do. not in the husk — " { 1890-91 10,178 1891-92 61,040	6,898 7,428	16,053 68,468	16,053 68,468	47,212 1,30,037	Dried fruits and nuts — " { 1890-91 2,021 1891-92 3,318	978 —	3,523 5,418	49,794 1,01,842	
Hides of cattle — " { 1890-91 5,400 1891-92 12,200	1,776 4,307	3,206 10,717	3,206 10,717	1,14,600 3,36,500	Wheat — " { 1890-91 4,805 1891-92 5,319	610 423	4,104 4,702	12,303 3,028	
Mats — " { 1890-91 31,568 1891-92 14,812	— 2	21,558 3,61,840	21,558 3,61,840	1,43,791 3,61,840	Gram and pulse — " { 1890-91 1,47,688 1891-92 1,05,610	8,074 10,503	1,73,578 1,76,073	3,33,368 4,30,123	
Dried fish — " { 1890-91 18,435 1891-92 64,748	1,004 1,407	20,439 66,155	20,439 66,155	1,30,270 3,13,321	Rice not in the husk — " { 1890-91 8,234 1891-92 4,973	50,847 84,063	34,368 90,028	74,380 2,70,447	
Linseed — " { 1890-91 65,100 1891-92 60,520	— —	65,100 60,520	65,100 60,520	3,07,508 1,09,600	Leah — " { 1890-91 17,719 1891-92 14,679	8,840 8,314	26,061 22,805	1,32,826 1,08,009	
Mustard seed — " { 1890-91 8,621 1891-92 10,091	2,16,109 6,87,447	2,25,131 6,90,467	2,25,131 6,90,467	7,33,748 10,31,018	Oil — " { 1890-91 1,40,143 1891-92 1,52,441	84,239 1,36,049	2,76,559 2,74,408	14,38,730 17,90,008	
Til or linlin — " { 1890-91 1,310 1891-92 2,130	8,153 14,316	5,925 10,045	5,925 10,045	23,048 63,545	Provisions, all other kinds — " { 1890-91 30,717 1891-92 24,104	1,093 3,363	37,739 30,468	3,61,654 2,69,449	
Spices, other than betelnuts — " { 1890-91 21,273 1891-92 23,608	— 4	24,250 23,608	24,250 23,608	25,548 47,304	Salt — " { 1890-91 2,30,468 1891-92 2,30,769	77,846 1,15,439	3,18,066 4,34,181	10,06,014 13,36,815	
Stones and marble — " { 1890-91 0,000 1891-92 13,600	— —	0,000 13,600	0,000 13,600	30,410 3,400	Betelnuts — " { 1890-91 10,235 1891-92 15,644	1,451 2,007	17,793 16,241	1,37,376 1,17,749	
Timber — " { 1890-91 1,814 1891-92 1,118	7,77,400 7,54,394	7,74,502 7,55,500	7,74,502 7,55,500	11,90,317 12,37,687	Spices, other than betelnuts — " { 1890-91 1,10,853 1891-92 1,04,217	5,073 11,890	1,18,168 1,18,507	8,88,686 9,24,481	
Oranges — " { 1890-91 15,947,230 1891-92 48,928,100	— —	45,941,230 48,928,100	45,941,230 48,928,100	2,37,033 3,05,496	Sugar, refined — " { 1890-91 51,423 1891-92 40,410	5,787 10,604	57,186 69,016	6,09,542 8,58,109	
					Do., unrefined — " { 1890-91 1,47,292 1891-92 1,09,109	23,173 97,616	3,00,466 2,16,620	9,77,314 11,08,440	
					Tobacco — " { 1890-91 34,164 1891-92 30,190	24,310 45,139	1,07,396 1,56,318	5,34,944 11,17,142	

STATEMENT OF BENGAL RAILWAY TRAFFIC.

The following abstract shows for the past two years the total weight and value of the external rail-borne trade of Bengal with other provinces:—

External trade of Bengal.

	1890-91.		1891-92.	
	Quantity. Mds.	Value. Rs.	Quantity. Mds.	Value. Rs.
Imports into Bengal	94,86,711	8,57,97,304.	1,47,93,149	10,12,93,906
Exports from Bengal	1,36,47,621	9,32,68,167	1,59,50,013	9,50,46,910
Total	2,31,34,332	17,90,65,401	3,07,43,162	19,63,45,816

The total trade carried during the year showed the very large increase of 33·32 per cent., an improvement being observable both in the imports and the exports. The increase of 53,06,438 maunds, or 55·93 per cent., in the imports was almost entirely due to larger despatches of wheat, rice, and linseed from the North-Western Provinces and Oudh and the Central Provinces, while the advance of 23,02,392 maunds, or 16·87 per cent., in the export trade, occurred chiefly under coal and coke, gunny bags, and kerosine oil, against decreases under rice, railway plant and rolling-stock.

The total import and export trade, province by province, in respect of the above traffic during the past two years is given in the abstract below, which also shows the percentage borne by the trade of each province to the total trade:—

Imports into Bengal.				Exports from Bengal.			
WHENCE IMPORTED.		Total Mds.	Percentage borne to total trade.	WHITHER EXPORTED.		Total Mds.	Percentage borne to total trade.
N.-W. Provinces and Oudh	{ 1890-91 ... { 1891-92	50,40,369 1,24,07,432	81.85 83.87	N.-W. Provinces and Oudh	{ 1890-91 ... { 1891-92	1,10,01,517 1,25,44,503	50.02 78.05
Punjab	{ 1890-91 ... { 1891-92	6,97,545 6,49,003	7.31 4.26	Punjab	{ 1890-91 ... { 1891-92	13,63,546 10,15,398	10.02 6.56
Central Provinces	{ 1890-91 ... { 1891-92	4,97,012 14,72,953	4.43 9.28	Central Provinces	{ 1890-91 ... { 1891-92	4,40,914 15,90,897	3.20 10.01
Rajputana and Central India	{ 1890-91 ... { 1891-92	3,01,443 3,02,002	3.18 2.35	Rajputana and Central India	{ 1890-91 ... { 1891-92	7,10,704 6,44,826	5.96 4.04
Other external Mds.	{ 1890-91 ... { 1891-92	13,093 81,909	0.19 0.54	Other external Mds.	{ 1890-91 ... { 1891-92	1,21,840 1,17,797	0.90 0.74
Total	{ 1890-91 ... { 1891-92	54,84,781 1,47,93,149	100.00 100.00	Total	{ 1890-91 ... { 1891-92	1,35,37,021 1,59,50,013	100.00 100.00

The following comparative statement shows the quantity and value of the different commodities carried both ways, during the past two years:—

CARRIERS OF TRAFFIC.	IMPORTS INTO BENGAL.		EXPORTS FROM BENGAL.		CANAL TRAFFIC INCLUDED IN COLUMNS 6 TO 9.			
	Quantity.	Value.	Quantity.	Value.	Imports.		Exports.	
					Quantity.	Value.	Quantity.	Value.
1.	2.	3.	4.	5.	6.	7.	8.	9.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Coal and coke	{ 1890-91 ... { 1891-92	1,120 16,286	1,077 5,790	84,87,016 90,67,795	21,31,334 30,64,815	...	21 454	...
Cotton, raw	{ 1890-91 ... { 1891-92	6,00,000 3,00,705	1,10,00,000 18,75,000	947 848	17,700 15,021	5,40,771 3,13,323	87,38,434 31,74,841	120 261
Cotton twist and yarn (European)	{ 1890-91 ... { 1891-92	1,000 1,712	1,00,000 1,00,000	47,892 47,892	24,00,000 27,00,000	311 122	50,771 11,130	47,892 47,892
Wool (Indian)	{ 1890-91 ... { 1891-92	3,237 1,728	1,00,000 63,000	11,430 86,111	3,45,000 10,25,000	594 101	6,000 8,000	7,117 17,000
Cotton yarn-goods (European)	{ 1890-91 ... { 1891-92	1,000 3,237	1,00,000 1,00,000	6,00,000 1,00,000	1,00,000 1,00,000	1,000 3,237	6,00,000 1,00,000	1,00,000 1,00,000
Wool (Indian)	{ 1890-91 ... { 1891-92	3,237 1,728	1,00,000 63,000	11,430 86,111	3,45,000 10,25,000	594 101	6,000 8,000	7,117 17,000
Indigo	{ 1890-91 ... { 1891-92	20,000 30,000	47,892 67,11,000	100 1,117	1,00,000 2,00,000	25,000 30,000	47,892 67,11,000	700 704
Wheat	{ 1890-91 ... { 1891-92	14,00,000 31,00,000	34,00,000 1,00,00,000	20,000 12,000	2,00,000 40,000	13,00,000 20,00,000	31,00,000 1,00,00,000	30 23
Rice not in the husk	{ 1890-91 ... { 1891-92	28,000 5,37,000	1,21,000 10,00,000	0,00,000 5,00,000	21,00,000 15,00,000	1,000 2,00,000	10,00,000 10,00,000	5,000 4,000
Grain and pulses	{ 1890-91 ... { 1891-92	6,00,000 10,00,000	15,00,000 20,00,000	20,000 7,000	1,00,000 1,00,000	1,00,000 1,00,000	15,00,000 20,00,000	40 26
Jowar and bajra	{ 1890-91 ... { 1891-92	2,377 8,000	4,000 10,000	3,000 1,000	3,000 1,000	1,000 2,000	...	...
Other food-grains	{ 1890-91 ... { 1891-92	1,40,000 4,00,000	3,00,000 2,00,000	80,000 84,000	1,00,000 1,00,000	20,000 30,000	41,000 1,00,000	43 275
Hides of cattle	{ 1890-91 ... { 1891-92	1,00,000 1,00,000	20,00,000 20,00,000	5,000 1,000	1,00,000 40,000	1,00,000 1,00,000	41,00,000 20,00,000	3,000 1,100
Gunny bags and cloth	{ 1890-91 ... { 1891-92	13,114 11,001	1,00,000 1,00,000	3,00,000 4,11,000	70,00,000 60,00,000	1,000 300	10,000 2,000	2,10,000 6,00,000
Shell-lac	{ 1890-91 ... { 1891-92	47,408 1,00,000	20,00,000 20,00,000	004 1,100	54,000 44,000	47,000 1,00,000	21,00,000 20,00,000	140 797
Copper unwrought	{ 1890-91 ... { 1891-92	321 113	24,000 1,000	20,000 47,000	11,00,000 12,00,000	8 10	200 400	20,000 40,000
Brass, sheet	{ 1890-91 ... { 1891-92	24 83	3,000 2,000	11,000 5,000	1,00,000 1,00,000	10 ...	400 ...	3,000 2,000
Copper, wrought	{ 1890-91 ... { 1891-92	1,101 400	47,000 20,000	4,000 5,000	1,00,000 2,00,000	303 271	14,700 11,000	3,000 5,000
Brass, sheet	{ 1890-91 ... { 1891-92	21,000 25,000	1,00,000 1,00,000	000 10,000	1,00,000 1,00,000	1,000 1,000	1,00,000 1,00,000	2,000 2,000
Iron	{ 1890-91 ... { 1891-92	40,700 1,00,000	2,00,000 0,00,000	1,00,000 0,00,000	57,00,000 40,00,000	11,000 13,000	65,000 83,000	7,10,000 7,00,000
Opium	{ 1890-91 ... { 1891-92	80,000 71,110	2,00,00,000 2,00,00,000	200 31	80,000 13,000	80,000 80,000	2,00,00,000 2,00,00,000	...
Ghee	{ 1890-91 ... { 1891-92	1,34,173 1,30,000	20,00,000 20,00,000	754 1,354	24,700 40,000	1,10,000 1,20,000	20,00,000 20,00,000	30 100
Salt	{ 1890-91 ... { 1891-92	80,744 1,10,000	2,00,000 2,00,000	11,14,700 10,10,000	1,000 500	2,000 1,000	2,00,000 2,00,000	10,00,000 10,00,000

Chief Stages of Traffic.	Imports into Bengal.		Exports from Bengal.		Calcutta Traffic included in columns 6 to 9.			
	Quantity.	Value.	Quantity.	Value.	Imports.		Exports.	
					Quantity.	Value.	Quantity.	Value.
1	2	3	4	5	6	7	8	9
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Saltpetre { 1890-91 2,31,979 14,39,594 77 443 1,38,745 14,39,071 78 443	{ 1891-92 2,46,112 14,79,124 185 1,348 1,48,088 14,78,881 186 1,353							
Linseed { 1890-91 21,21,587 25,14,189 443 1,792 50,08,839 25,77,388 100 581	{ 1891-92 21,12,121 1,14,86,449 1,154 4,707 50,21,329 1,12,10,126 90 83							
Rape and mustard seed ... { 1890-91 2,41,139 3,14,412 2,306 2,313 1,38,919 7,29,979 246 1,429	{ 1891-92 4,39,245 20,07,774 4,706 21,441 1,24,937 10,20,171 48 182							
Oil of linseed { 1890-91 25,744 1,10,084 2,994 2,104 28,179 1,07,414 9 38	{ 1891-92 29,713 2,01,346 2,003 2,104 10,408 2,04,433 136 744							
Caster seed { 1890-91 43,124 1,66,437 1,447 5,789 31,339 1,13,466 4 14	{ 1891-92 91,553 2,70,589 1,481 4,269 29,316 2,04,191							
Poppy seed { 1890-91 2,48,278 10,54,106 9 24 2,27,784 9,40,121	{ 1891-92 2,14,705 11,61,826 5 21 2,03,018 10,79,143							
Milk, raw { 1890-91 69 20,267 2,615 8,00,792 61 22,279 483 2,21,669	{ 1891-92 126 47,495 2,614 8,06,132 89 22,765 577 1,04,554							
Do., manufactured ... { 1890-91 230 1,00,416 1,392 12,81,458 244 1,06,607 537 2,71,179	{ 1891-92 291 1,34,458 1,707 12,81,458 34 42,114 543 4,10,013							
Sugar, refined { 1890-91 9,274 47,637 1,35,668 18,29,181 2,083 21,264 1,17,401 13,41,210	{ 1891-92 25,244 2,41,205 28,116 8,64,190 5,207 24,247 74,063 7,49,630							
Do., unrefined { 1890-91 71,284 3,88,069 4,28,288 20,47,213 23,025 1,18,176 23,449 1,05,471	{ 1891-92 1,01,068 5,05,491 4,58,285 20,07,392 10,148 76,719 19,013 66,668							
Tea (Indian) { 1890-91 10,107 2,25,104 1,764 84,384 9,716 2,20,424 1,440 22,184	{ 1891-92 14,807 6,00,297 1,121 34,741 14,610 2,27,077 1,987 37,239							
Tobacco { 1890-91 1,640 20,124 2,27,273 18,16,212 2,28 7,231 1,469 40,478	{ 1891-92 24,073 1,01,777 1,74,143 17,79,231 18,123 1,00,080 1,124 40,010							

The following statement shows the total weight of the internal rail-borne trade of Bengal carried between the different registration blocks within the province during the past two years:—

Internal trade of Bengal.

	Into the Bihar block.	Into the Western Bengal block.	Into the Eastern Bengal block.	Into the Northern Bengal block.	Into the Dacca block.	Into the Calcutta block.	Into the Chota Nagpur block.	Total.
1	2	3	4	5	6	7	8	9
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Export from the—								
Bihar block { 1890-91 ... 34,01,284 4,61,462 2,40,497 22,518 1,00,73,866 45,108 1,44,49,894	{ 1891-92 ... 40,26,421 5,21,213 2,30,023 1,669 1,15,50,376 50,677 1,05,69,709							
Western Bengal block ... { 1890-91 9,26,946 ... 20,05,785 10,240 1,342 1,56,36,094 1,12,316 5,09,01,714	{ 1891-92 14,22,244 ... 44,37,249 2,91,223 2,129 2,46,74,454 39,730 2,13,06,428							
Eastern Bengal block ... { 1890-91 61,156 1,26,733 ... 2,51,145 64,476 68,29,673 815 40,47,120	{ 1891-92 81,994 2,19,217 ... 2,77,771 64,569 63,93,690 1,543 72,15,161							
Northern Bengal block { 1890-91 5,02,413 2,79,241 10,70,078 ... 3,192 37,16,212 460 75,26,074	{ 1891-92 2,37,544 2,23,006 10,00,218 ... 12,170 47,36,105 246 49,57,291							
Dacca block { 1890-91 441 271 54,421 2,090 ... 13,24,664 7 15,64,640	{ 1891-92 1,628 1,104 46,892 9,997 ... 2,26,717 4 14,49,123							
Calcutta block { 1890-91 45,40,929 10,27,284 17,09,934 22,01,663 2,07,670 ... 2,07,121 1,09,70,018	{ 1891-92 42,65,080 15,76,119 15,22,253 22,01,122 4,40,212 ... 5,66,499 1,11,79,784							
Chota Nagpur block ... { 1890-91 24,874 4,14,446 7,776 491 2,28,470 ... 5,04,735	{ 1891-92 2,40,978 4,16,166 22,282 22,328 2 5,00,865 ... 14,34,245							
Total { 1890-91 10,74,783 24,21,629 29,27,267 22,38,299 4,07,073 4,01,24,118 4,91,074 1,22,81,284	{ 1891-92 22,32,148 28,30,024 79,35,223 24,21,070 5,16,121 4,80,85,246 6,04,241 1,45,20,061							

The total downward and upward trade, and the proportion borne by the Calcutta trade to the total trade during the past two years, are given below:—

	Total traffic.		Calcutta traffic.		Proportion of the Calcutta traffic to the total trade.	
	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Mds.	Mds.	Per cent.	Per cent.
Downward traffic ...	4,90,20,598	6,03,53,244	4,91,34,119	4,90,85,218	26'18	81'32
Upward " ...	1,34,64,266	1,41,29,707	1,03,76,018	1,11,76,724	31'39	78'74
Total ...	7,23,84,864	7,45,49,951	6,00,10,137	6,02,61,970	83'01	80'28

The quantities and values of all the chief articles of trade during the past two years, are shown in the subjoined statement:—

1	DOWN TRAFFIC.		UP TRAFFIC.		CALCUTTA TRAFFIC INCLUDED IN COLUMNS 2 TO 5.			
	Quantity.	Value.	Quantity.	Value.	Down.		Up.	
					Quantity.	Value.	Quantity.	Value.
	2	3	4	5	6	7	8	9
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Coal and coke ... { 1890-91 1891-92	2,06,19,910 2,41,33,089	1,00,37,431 1,05,53,636	6,72,455 4,32,257	2,41,671 1,62,000	2,17,17,403 2,14,92,478	81,44,949 86,55,329	23,499 35,292	29,004 13,301
Cotton, raw ... { 1890-91 1891-92	22,173 37,051	6,03,225 6,77,714	8,064 5,972	1,63,047 1,65,036	29,064 36,390	8,01,825 8,64,002	8,858 8,648	1,08,267 1,07,388
Cotton twist (European) { 1890-91 1891-92	125 21	7,381 1,213	1,11,990 1,22,028	67,07,295 74,50,867	80 21	5,503 1,313	1,11,904 1,25,529	67,04,148 74,47,302
Ditto (Indian) ... { 1890-91 1891-92	23,551 50,483	11,47,257 10,38,258	1,22,179 1,33,974	43,22,314 48,16,385	26,179 59,417	11,75,167 10,15,944	1,24,347 1,34,303	40,42,677 42,87,760
Cotton piece-goods (Euro- { 1890-91 pean) ... { 1891-92	1,040 935	75,000 45,982	13,68,171 11,65,321	9,57,72,116 7,12,01,896	623 631	49,900 22,472	13,67,342 14,64,494	11,56,38,046 7,11,62,130
Ditto (Indian) ... { 1890-91 1891-92	7,464 7,626	9,14,072 2,36,484	4,798 4,665	3,88,024 1,75,540	3,344 3,291	4,11,312 1,20,024	3,672 2,633	4,57,626 1,36,444
Indigo ... { 1890-91 1891-92	80,544 1,07,003	1,25,74,720 2,40,48,028	178 817	77,172 1,23,127	60,528 1,06,947	1,25,79,672 5,00,62,642	333 778	67,932 1,43,871
Wheat ... { 1890-91 1891-92	13,19,491 27,14,655	33,46,377 63,78,613	22,140 3,062	16,101 28,641	13,16,225 21,08,174	32,20,637 65,10,500	2,220 3,375	6,508 1,608
Rice not in the husk ... { 1890-91 1891-92	46,03,974 37,44,328	1,50,00,487 1,07,50,161	8,57,746 13,78,210	22,51,523 20,62,206	42,04,109 50,15,554	1,10,32,702 1,41,07,313	60,406 51,213	1,57,748 1,52,262
Ditto in the husk ... { 1890-91 1891-92	9,41,816 5,18,334	14,72,447 8,91,043	1,20,881 10,258	4,91,821 1,61,244	3,27,703 2,22,194	4,91,667 2,31,023	15,028 6,262	23,442 10,390
Jewelry and jewelry ... { 1890-91 1891-92	4,795 0,167	10,350 10,188	124 247	414 211	4,207 4,318	0,703 10,283	16 343	32 100
Gram and pulse ... { 1890-91 1891-92	15,80,531 22,24,745	47,01,533 50,74,165	1,63,097 1,37,253	3,68,318 3,13,024	14,37,683 18,00,022	35,13,817 46,50,100	79,340 69,520	1,09,471 1,74,322
Other food-grains ... { 1890-91 1891-92	3,11,873 4,16,782	8,11,003 7,15,384	8,110 6,482	8,053 9,506	9,91,014 3,12,623	5,11,561 0,19,604	1,051 2,173	1,849 4,163
Hides of cattle ... { 1890-91 1891-92	4,77,888 3,66,700	1,38,01,567 10,72,026	2,704 4,174	78,323 1,10,663	4,78,171 3,64,208	1,34,74,574 75,04,028	607 966	11,871 21,027
Jute, raw ... { 1890-91 1891-92	21,55,888 70,54,442	2,46,43,406 3,26,72,440	48,779 11,768	1,27,135 68,625	84,00,064 63,67,073	2,75,00,580 2,24,35,375	5,671 4,840	17,731 26,039
Gunny bags and cloth ... { 1890-91 1891-92	4,01,927 4,13,123	46,61,251 43,27,291	3,63,304 3,10,311	23,02,080 41,20,700	5,15,681 14,07,828	44,50,310 40,72,508	2,17,714 3,38,346	29,77,191 25,01,154
Stick-lac ... { 1890-91 1891-92	1,31,293 66,567	21,32,611 10,74,013	8,405 7,174	31,331 1,22,854	32,040 41,781	5,20,650 7,15,780	654 784	16,498 18,494
Shall-lac ... { 1890-91 1891-92	77,471 63,124	20,03,092 24,81,903	300 217	54,953 9,065	75,913 64,803	24,47,300 24,81,610	501 83	23,102 7,366
Copper, unwrought ... { 1890-91 1891-92	4,776 4,441	1,20,712 1,26,618	10,119 4,570	2,00,705 1,81,345	4,710 4,431	1,28,945 3,26,284	10,091 0,246	2,27,832 1,77,093
Brass, ditto ... { 1890-91 1891-92	482 1,025	10,679 23,040	5,512 9,821	2,14,190 2,20,978	249 422	5,002 10,170	8,775 0,737	1,67,488 2,10,083
Copper, wrought ... { 1890-91 1891-92	378 480	12,972 10,680	7,342 5,867	2,13,290 1,77,114	231 280	11,400 0,001	7,273 0,207	2,60,078 1,70,446
Brass, ditto ... { 1890-91 1891-92	20,073 22,807	8,28,611 8,08,707	65,721 51,223	27,18,082 26,11,680	18,616 20,548	7,43,146 7,04,774	62,053 48,030	25,59,709 18,27,708
Iron ... { 1890-91 1891-92	1,12,774 2,02,297	5,02,570 2,00,911	0,19,645 11,04,259	33,44,425 83,20,085	1,04,742 1,10,047	8,43,710 0,22,723	5,81,847 11,06,020	27,74,325 62,56,485
Other metals ... { 1890-91 1891-92	38,110 10,040	2,03,480 1,06,638	63,925 70,457	7,00,706 7,02,041	15,036 11,714	1,70,066 1,21,782	50,408 65,183	6,23,546 7,20,496
Oil, kerosene ... { 1890-91 1891-92	15,747 11,880	60,391 40,420	5,43,254 5,18,229	20,44,708 22,02,473	81 1,086	304 4,203	6,47,767 3,89,730	10,79,190 10,66,343
Linseed ... { 1890-91 1891-92	31,20,000 38,01,552	1,37,07,000 1,07,61,434	19,279 17,098	70,870 70,340	21,00,227 34,63,003	1,35,00,048 1,58,37,731	59 325	224 1,605
Rape and mustard seed ... { 1890-91 1891-92	12,70,435 16,08,090	62,42,236 61,02,000	1,40,019 1,34,151	5,81,467 6,70,112	0,84,076 11,34,310	28,20,530 45,21,645	24,808 61,267	2,34,521 2,00,345
Tel or jingill ... { 1890-91 1891-92	78,620 2,00,917	2,91,710 8,27,018	482 413	1,034 1,678	65,578 1,08,710	2,74,312 7,04,840	308 336	1,418 1,603
Castor seed ... { 1890-91 1891-92	2,08,000 5,52,270	11,02,004 19,63,961	81 595	376 501	2,06,123 5,09,941	11,54,312 18,06,388	...	...
Poppy seed ... { 1890-91 1891-92	1,70,000 1,71,428	7,44,127 7,29,649	1,200 814	7,046 8,885	1,54,301 1,54,104	0,15,779 0,64,358	1,392 691	1,534 2,090
Other oil-seeds ... { 1890-91 1891-92	1,10,460 1,11,374	3,17,073 3,19,813	680 7,708	1,885 4,011	84,646 62,405	2,44,165 2,86,714	514 1,661	1,478 4,770
Opium ... { 1890-91 1891-92	77,802 58,846	1,93,23,788 1,20,08,909	1,914 1,780	4,54,157 4,54,109	77,137 58,720	1,93,19,340 1,30,77,329	1,404 1,780	4,54,187 4,58,449
Ghee ... { 1890-91 1891-92	48,808 58,708	14,51,182 20,84,663	8,880 8,140	4,22,068 2,89,980	27,420 40,228	9,07,704 14,30,324	9,083 7,708	9,27,384 9,75,682
Salt ... { 1890-91 1891-92	20,413 6,601	66,343 20,628	43,39,516 46,74,385	1,46,74,403 1,41,84,890	279 222	1,210 703	43,17,348 43,48,043	1,40,21,049 1,48,78,288

	Down Traffic.		Up Traffic.		CALCUTTA TRAFFIC INCLUDED IN COLUMNS 2 TO 5.			
	Quantity.	Value.	Quantity.	Value.	Down.		Up.	
					Quantity.	Value.	Quantity.	Value.
1	2	3	4	5	6	7	8	9
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Saltpetre { 1890-91 1891-92	4,12,390 3,93,896	25,71,240 25,40,793	1,948 5,756	11,168 26,226	4,11,570 3,90,303	25,63,418 25,44,079	1,889 5,781	11,098 26,064
Silk, raw { 1890-91 1891-92	24,980 20,403	88,72,125 63,06,342	1,076 751	6,12,074 2,34,534	17,677 16,145	62,45,013 50,45,313	941 577	5,43,947 1,50,130
Silk, manufactured (Indian) { 1890-91 1891-92	2,674 2,329	23,94,010 17,24,985	178 223	1,45,220 1,71,666	2,404 2,164	22,57,220 10,44,270	189 113	1,35,540 55,093
Sugar, refined { 1890-91 1891-92	30,408 27,414	2,10,914 3,74,140	1,20,136 1,13,321	13,55,823 11,68,410	11,841 21,093	1,24,831 2,10,230	1,25,380 1,16,317	13,47,366 11,43,170
Do., unrefined { 1890-91 1891-92	4,17,333 4,13,786	20,34,407 18,62,037	2,44,437 2,34,437	11,61,643 10,36,057	2,71,509 2,62,648	12,03,803 13,70,310	1,38,274 1,44,040	7,71,598 6,60,150
Stone and lime { 1890-91 1891-92	10,81,560 20,63,734	8,40,006 15,64,080	40,002 27,690	24,081 41,246	11,12,204 12,32,074	5,56,140 8,10,035	41,754 31,637	23,578 32,076
Tee, Indian { 1890-91 1891-92	3,32,473 6,13,095	1,10,03,172 1,70,04,323	1,182 1,653	41,828 66,616	3,52,479 5,13,063	1,30,47,444 1,74,02,320	1,092 1,094	23,962 24,327
Tobacco { 1890-91 1891-92	4,31,370 5,67,047	88,41,870 49,51,780	25,121 19,237	1,04,087 1,70,729	2,72,820 3,70,640	21,63,682 32,84,016	13,341 11,023	1,63,323 1,20,770

TRAFFIC ALONG THE STATE RAILWAYS.

The total quantity and value of the traffic carried up and down by the Eastern Bengal State Railway during the past two years, are shown below:—

		TOTAL.			
		Downward traffic.	Upward traffic.	Quantity.	Value.
		Mds.	Mds.	Mds.	Rs.
1890-91 ...	1,34,66,250	84,19,324	2,18,85,574	14,49,48,030	
1891-92 ...	1,73,60,304	92,95,843	2,66,56,147	17,88,03,952	

The quantities and values of the chief staples of traffic carried downwards and upwards by this railway during the past two years, are given below:—

CHIEF STAPLES OF TRAFFIC.		Downward traffic.	Upward traffic.	TOTAL.	
				Quantity.	Value.
1		2	3	4	5
		Mds.	Mds.	Mds.	Rs.
Coal and coke { 1890-91 1891-92		9,77,139 34,17,298	32,08,551 31,77,343	41,85,690 66,94,636	16,60,634 24,72,977
Cotton, raw { 1890-91 1891-92		1,10,644 83,911	2,886 2,324	1,13,424 86,235	21,26,700 16,60,230
Cotton twist and yarn { 1890-91 1891-92		86,108 60,313	1,04,070 1,50,430	1,41,176 2,00,873	70,14,476 93,14,420
Cotton piece-goods (Euro-pean) { 1890-91 1891-92		347 50	6,26,408 6,89,312	6,26,815 6,87,369	4,38,77,060 4,69,77,093
Drugs and chemicals, not intoxicating { 1890-91 1891-92		1,073 2,869	6,087 6,240	6,138 9,120	60,428 1,00,419
Indigo { 1890-91 1891-92		4,183 11,965	285 714	4,473 12,679	9,12,482 23,77,318
Termeric { 1890-91 1891-92		1,01,350 77,954	7,389 6,485	1,08,689 84,439	7,52,976 6,54,402
Wheat { 1890-91 1891-92		1,07,109 1,89,725	4,410 3,466	1,11,513 1,93,191	2,78,783 5,65,424

CHIEF STAPLES OF TRAFFIC.			Downward traffic.	Upward traffic.	TOTAL.	
					Quantity.	Value.
1			2	3	4	5
			Mds.	Mds.	Mds.	Rs.
Paddy	...	{ 1890-91 1891-92	6,23,133 2,19,475	63,780 34,124	6,91,913 2,53,599	10,37,370 4,12,098
Rice	...	{ 1890-91 1891-92	7,06,732 7,14,719	1,33,980 1,74,534	8,45,612 8,89,253	32,10,791 35,55,602
Gram and pulse	...	{ 1890-91 1891-92	3,99,302 8,44,273	1,95,354 1,09,900	5,94,656 9,54,269	14,86,640 23,85,658
Hides of cattle	...	{ 1890-91 1891-92	2,21,038 1,88,231	1,201 623	2,22,242 1,88,754	47,78,303 40,68,211
Jute, raw	...	{ 1890-91 1891-92	65,53,659 67,59,871	2,528 2,181	66,56,187 67,62,052	2,03,00,584 3,88,10,260
Gunny bags and cloth	...	{ 1890-91 1891-92	4,42,678 8,83,743	50,807 1,05,792	4,93,485 4,89,535	49,34,850 51,40,118
Liquors	...	{ 1890-91 1891-92	62 223	17,560 20,134	17,622 20,347	6,19,472 7,88,907
Copper, wrought and wrought	un- ...	{ 1890-91 1891-92	30 336	4,036 2,330	4,066 2,666	1,36,408 84,596
Brass, wrought and wrought	un- ...	{ 1890-91 1891-92	18,005 16,571	53,235 38,722	66,240 52,293	20,79,308 19,98,281
Iron	...	{ 1890-91 1891-92	14,902 20,760	2,40,399 3,38,443	2,55,794 3,59,203	12,78,970 17,06,214
Oils	...	{ 1890-91 1891-92	655 3,007	2,65,820 5,49,369	2,66,284 5,52,466	17,06,568 20,42,617
Linseed	...	{ 1890-91 1891-92	3,31,700 3,32,501	1,155 263	3,32,855 3,32,764	13,31,424 13,72,652
Rape and mustard seed	...	{ 1890-91 1891-92	3,03,064 5,49,455	37,231 25,119	3,40,895 5,74,572	14,30,942 24,41,931
Provisions	...	{ 1890-91 1891-92	70,802 84,898	1,16,525 1,37,508	1,87,127 2,12,406	20,27,066 22,79,279
Railway plant and rolling- stock	...	{ 1890-91 1891-92	2,08,570 1,91,285	5,75,130 8,01,068	7,83,700 2,92,328	43,20,335 50,63,632
Salt	...	{ 1890-91 1891-92	1,546 1,391	12,83,579 18,50,467	12,85,125 13,31,858	41,76,658 43,18,306
Silk, raw (Indian)	...	{ 1890-91 1891-92	6,600 7,451	98 177	6,698 7,628	24,49,793 23,89,760
Spices	...	{ 1890-91 1891-92	2,71,988 3,67,549	1,16,863 86,157	3,88,651 4,53,706	36,93,575 36,90,548
Sugar, unrefined	...	{ 1890-91 1891-92	1,71,517 2,27,405	2,23,105 2,29,257	4,04,622 4,56,722	19,72,553 20,55,249
Tea	...	{ 1890-91 1891-92	3,26,451 5,06,800	672 1,300	3,27,123 5,08,100	1,17,76,428 1,74,02,425
Tobacco	...	{ 1890-91 1891-92	2,80,126 2,76,543	16,134 23,150	2,96,260 3,98,699	23,19,896 36,70,968

The total weight and value of the traffic borne by this Railway during Calcutta and South-Eastern the past two years, are given below :—
State Railway.

		Traffic towards Calcutta.	Traffic from Calcutta.	TOTAL.	
		Mds.	Mds.	Quantity.	Value.
		Mds.	Mds.	Mds.	Rs.
1890-91	...	11,65,265	4,74,008	16,39,273	54,33,826
1891-92	...	12,71,247	26,32,381	39,03,628	65,03,312

The subjoined abstract shows the quantities and values of the chief articles of trade carried over this line during the past two years:—

Towards Calcutta.

	Quantity.		Value.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Ra.	Ra.
Kerosine oil ...	1,82,161	2,90,641	6,92,699	12,35,224
Rice ...	1,60,724	2,56,982	4,21,900	7,38,823
Other food-grains ...	44,558	28,110	67,475	47,539
Hides and skins ...	1,635	2,031	35,153	43,858
Metals ...	2,406	855	13,261	5,973
Sugar (unrefined) ...	42	3,746		15,997

From Calcutta.

	Quantity.		Value.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Mds.	Mds.	Ra.	Ra.
Coal and coke ...	1,39,226	24,03,704	52,210	9,02,139
Railway plant and rolling-stock.	68,458	78,393	3,18,073	8,18,975
Cotton piece-goods ...	739	892	53,797	60,659
Provisions ...	3,003	8,235	28,575	78,415
Salt ...	3,766	3,693	12,240	11,541
Spices ...	2,737	2,807	22,897	23,328
Tobacco ...	6,545	6,548	43,530	60,754

The statistics of trade carried by the Northern Bengal State Railway include those of the Assam-Bihār section. The total quantity and value of the traffic borne by both railways during the past two years, are given in the subjoined statement:—

		Down traffic.	Up traffic.	TOTAL.	
				Quantity.	Value.
		Mds.	Mds.	Mds.	Ra.
1890-91 ...		89,03,137	43,04,894	1,32,03,031	8,90,87,301
1891-92 ...		77,17,245	62,70,502	1,29,87,747	10,10,31,863

The quantities and values of the principal articles carried over this line during the past two years, are shown in the following statement:—

CHIEF STAPLES OF TRAFFIC.	Down traffic.	Up traffic.	TOTAL.	
			Quantity.	Value.
1	2	3	4	5
	Mds.	Mds.	Mds.	Ra.
Coal and coke ... { 1890-91 { 1891-92	72,884 16,137	6,50,904 4,46,968	7,23,788 4,63,096	3,71,408 1,73,961
Cotton twist and yarn { 1890-91 { 1891-92	226 176	24,036 31,606	24,262 31,682	13,25,355 16,59,375
Cotton piece-goods { 1890-91 (European) ... { 1891-92	1,196 868	3,45,331 3,65,736	3,46,527 3,67,804	2,43,56,890 2,49,97,072
Drugs and chemicals, { 1890-91 not intoxicating ... { 1891-92	798 1,813	2,974 3,790	3,767 5,611	48,175 61,721

CHIEF STAPLES OF TRAFFIC.	Down traffic.	Up traffic.	Total.	
			Quantity.	Value.
1	2	3	4	5
	Mds.	Mds.	Mds.	Rs.
Intoxicating drugs, { 1890-91 other than opium ... { 1891-92	4,709 5,437	1,164 125	6,873 5,563	69,742 1,90,070
Jute, raw ... { 1890-91 ... { 1891-92	40,97,121 38,62,782	4,443 2,070	41,01,564 38,65,452	1,38,17,888 1,82,77,280
Gunny bags and cloth { 1890-91 ... { 1891-92	4,47,121 4,01,074	54,892 37,937	5,02,013 4,39,011	50,20,180 46,06,615
Gram and pulse ... { 1890-91 ... { 1891-92	35,619 43,996	2,04,329 2,46,392	2,39,948 2,90,328	5,90,870 7,26,820
Rice ... { 1890-91 ... { 1891-92	11,51,270 8,26,651	3,32,159 9,20,596	14,83,429 17,47,187	38,94,001 50,23,071
Paddy ... { 1890-91 ... { 1891-92	16,15,091 8,89,607	18,984 2,56,111	16,34,015 11,45,678	24,51,032 18,61,797
Other food-grains ... { 1890-91 ... { 1891-92	31,187 38,079	90,174 38,850	61,361 71,038	1,30,600 1,72,126
Hides of cattle ... { 1890-91 ... { 1891-92	63,133 67,231	1,274 1,175	64,407 68,406	19,84,760 12,56,729
Leather, manufactured { 1890-91 ... { 1891-92	115 454	2,689 4,639	2,802 6,003	6,62,671 10,49,379
Liquors ... { 1890-91 ... { 1891-92	51 49	11,827 11,916	11,878 11,965	3,84,011 4,46,535
Metals ... { 1890-91 ... { 1891-92	15,465 16,140	2,18,400 3,00,627	2,33,865 3,16,667	28,13,364 26,94,973
Rape and mustard { 1890-91 seed ... { 1891-92	2,50,104 2,50,720	6,684 67,233	2,56,788 3,17,959	10,59,260 13,51,900
Linseed ... { 1890-91 ... { 1891-92	36,325 39,935	10 142	36,335 40,077	1,46,340 1,66,317
Railway plant, and { 1890-91 rolling-stock ... { 1891-92	1,08,607 1,57,871	2,71,409 2,63,331	3,80,006 4,21,202	19,50,356 19,17,823
Ghee ... { 1890-91 ... { 1891-92	673 910	6,924 7,851	7,597 8,761	2,42,751 3,11,015
Other kinds of provi- { 1890-91 sions ... { 1891-92	44,373 38,469	1,17,975 1,70,020	1,62,348 2,08,489	15,48,623 19,69,748
Salt ... { 1890-91 ... { 1891-92	11,002 70,170	10,21,620 9,01,822	10,33,122 9,71,492	32,67,646 36,36,912
Spices ... { 1890-91 ... { 1891-92	31,370 28,580	83,730 75,342	1,15,100 1,03,931	14,21,992 10,33,444
Sugar, refined and { 1890-91 unrefined ... { 1891-92	6,226 23,894	1,77,394 2,02,880	1,83,620 2,26,714	10,37,246 11,83,370
Tea, Indian ... { 1890-91 ... { 1891-92	2,82,913 3,57,454	667 628	2,83,580 3,58,082	1,01,83,680 1,22,82,596
Tobacco ... { 1890-91 ... { 1891-92	3,80,973 5,33,660	3,027 21,432	3,84,000 5,55,092	50,72,596 49,50,550

The total traffic carried over this line during the past two years, was as follows :—

		Downward traffic. Mds.	Upward traffic. Mds.	TOTAL.	
				Quantity. Mds.	Value. Rs.
1890-91	...	20,05,120	6,94,898	27,00,018	2,61,23,004
1891-92	...	11,98,713	7,88,950	19,87,663	2,54,84,479

The principal commodities carried each way during the past two years, are exhibited in the following statement :—

CHIEF STAPLES OF TRAFFIC.		Downward traffic.	Upward traffic.	TOTAL.	
				Quantity.	Value.
1		2	3	4	5
		Mds.	Mds.	Mds.	Rs.
Coal and coke	{ 1890-91 ... { 1891-92	2,828 1,878	86,868 1,23,291	88,696 1,24,969	33,261 46,863
Cotton, raw	{ 1890-91 ... { 1891-92	21,502 20,937	5,887 5,095	27,389 26,053	5,13,544 4,68,364
Cotton twist and yarn (European)	{ 1890-91 ... { 1891-92	... ...	27,226 27,945	27,226 27,945	16,47,173 16,13,824
Ditto (Indian)	{ 1890-91 ... { 1891-92	118 560	803 1,673	919 2,233	29,858 1,58,543
Cotton piece-goods (European)	{ 1890-91 ... { 1891-92	50 6	1,62,147 1,75,724	1,62,197 1,75,730	1,13,53,700 1,13,43,690
Rice not in the husk	{ 1890-91 ... { 1891-92	1,474 28,725	1,328 1,508	2,803 30,233	7,355 86,920
Gram and pulse	{ 1890-91 ... { 1891-92	3,348 14,427	26,928 23,189	30,276 37,616	75,600 94,040
Hides of cattle	{ 1890-91 ... { 1891-92	1,40,095 1,19,721	974 516	1,41,069 1,20,237	30,32,984 25,85,096
Jute, raw	{ 1890-91 ... { 1891-92	17,35,500 8,61,158	10,634 267	17,46,234 8,61,425	54,56,981 43,07,125
Leather, manufac. tured	{ 1890-91 ... { 1891-92	69 87	2,327 3,255	2,396 3,292	6,64,258 6,90,497
Brass, wrought	{ 1890-91 ... { 1891-92	239 693	9,202 6,658	9,441 7,381	3,89,441 2,89,704
Iron	{ 1890-91 ... { 1891-92	818 621	27,178 30,444	27,996 31,065	1,39,980 1,47,559
Rape and mustard seed	{ 1890-91 ... { 1891-92	27,044 44,167	66 275	27,130 44,432	1,11,911 1,88,836
Railway plant and rolling-stock	{ 1890-91 ... { 1891-92	23,841 28,340	44,808 40,815	68,649 67,154	3,43,799 2,72,755
Salt	{ 1890-91 ... { 1891-92	... ...	22,031 95,391	22,031 95,391	73,551 3,07,472
Spices	{ 1890-91 ... { 1891-92	2,669 4,947	11,161 10,316	13,830 15,268	1,38,145 2,30,692
Sugar, unrefined	{ 1890-91 ... { 1891-92	60 90	74,606 56,606	74,666 56,605	3,03,948 2,54,722

The total quantity and value of the traffic carried over the Nalhati State Railway during the past two years, are shown in the table below :—

	Nalhati to Azimganj. Mds.	Azimganj. to Nalhati. Mds.	Quantity. Mds.	Value. Rs.
1890-91	4,18,591	1,21,107	5,39,698	66,67,269
1891-92	4,64,786	1,03,732	5,68,518	46,08,079

The chief articles of traffic carried each way during the past two years, are shown in the statement below :—

CHIEF ARTICLES OF TRAFFIC.	Nalhati to Azimganj.	Azimganj to Nalhati.	TOTAL.	
			Quantity.	Value.
1	2	3	4	5
	Mds.	Mds.	Mds.	Rs.
Coal and coke ... { 1890-91 { 1891-92	2,37,159 2,39,578	.. 15	2,37,159 2,38,593	38,936 89,847
Cotton, raw ... { 1890-91 { 1891-92	1,863 2,276	* 8 43	1,871 2,318	36,081 41,726
Cotton piece-goods { 1890-91 (European and ... { 1891-92	10,155 7,839	230 234	10,385 8,073	7,26,960 5,49,372
Jute, raw, and gunny { 1890-91 bags and cloth ... { 1891-92	1,606 1,112	34,398 52,357	36,004 53,369	1,33,378 2,76,591
Gram and pulse ... { 1890-91 { 1891-92	42,552 60,280	49,991 21,034	91,553 81,314	2,18,604 1,90,209
Hides and skins ... { 1890-91 { 1891-92	142 127	1,405 1,681	1,637 1,808	36,196 38,872
Liquors ...* ... { 1890-91 { 1891-92	195 253	... 125	195 378	8,209 10,178
Metals { 1890-91 { 1891-92	4,934 2,788	1,540 1,306	6,464 4,099	1,30,320 84,338
Railway plant and { 1890-91 rolling-stock. ... { 1891-92	6,700 36,631	2,045 202	8,745 35,803	36,468 1,68,746
Oil-seeds ...* ... { 1890-91 { 1891-92	11,039 39,566	3,093 4,857	14,972 44,412	60,088 1,77,786
Oils { 1890-91 { 1891-92	1,516 1,991	55 1,042	1,571 3,033	16,996 26,522
Silk, raw (Indian) ... { 1890-91 { 1891-92	1,539 995	3,875 3,678	5,419 4,678	19,80,171 14,60,812
Silk piece-goods { 1890-91 (Indian) ... { 1891-92	1,834 258	1,408 1,084	3,242 1,342	26,00,810 10,10,368

The gross weight and value of the traffic carried by this railway during the past two years, are shown in the statement appended :—

	Downward traffic.	Upward traffic.	TOTAL.	
	Mds.	Mds.	Quantity. Mds.	Value. Rs.
1890-91 ...	58,79,261	47,87,283	1,06,65,544	8,90,70,365
1891-92 ...	60,71,890	50,61,614	1,01,33,504	6,99,60,606

The principal articles of merchandise carried over this line during the past two years, were as follows:—

CHIEF STAPLES OF TRAFFIC.	Traflic to- wards Ganges bank.	Traflic from Ganges bank.	TOTAL.	
			Quantity.	Value.
1	2	3	4	5
	Mds.	Mds.	Mds.	Rs.
Coal and coke ... { 1890-91 { 1891-92	0,248 1,37,315	6,50,738 5,93,819	6,50,986 7,31,134	2,47,495 2,74,175
Cotton, raw ... { 1890-91 { 1891-92	1,319 1,345	11,932 9,850	13,242 11,195	2,40,088 2,61,510
Cotton piece-goods { 1890-91 (European) ... { 1891-92	3,027 1,841	2,86,956 2,58,707	2,89,983 2,60,548	2,02,98,810 1,77,17,264
Ditto (Indian) ... { 1890-91 { 1891-92	752 1,031	6,571 4,286	7,323 5,317	9,00,729 3,77,567
Drugs and chemicals { 1890-91 { 1891-92	497 3,690	2,340 2,300	2,837 5,990	1,43,269 96,178
Indigo ... { 1890-91 { 1891-92	61,671 58,964	1,400 1,608	63,077 58,592	1,28,07,708 1,09,86,000
Jute and gunny bags { 1890-91 and cloth ... { 1891-92	25,475 28,915	97,096 72,854	1,22,571 1,01,069	11,91,711 9,88,767
Wheat ... { 1890-91 { 1891-92	1,18,744 98,225	15,880 17,049	1,34,624 1,15,874	3,36,560 3,33,188
Gram and pulse ... { 1890-91 { 1891-92	42,449 20,977	15,400 9,155	57,849 30,139	1,44,623 75,333
Rice ... { 1890-91 { 1891-92	21,66,180 10,03,561	9,99,403 13,79,535	31,65,583 29,83,096	83,09,803 85,76,360
Other grains ... { 1890-91 { 1891-92	7,39,161 6,02,410	3,93,143 3,96,905	11,32,304 9,99,315	19,81,850 17,17,901
Hides and skins ... { 1890-91 { 1891-92	82,198 82,844	3,867 6,610	86,065 88,454	21,92,958 21,63,141
Lac ... { 1890-91 { 1891-92	659 926	13,738 9,622	14,391 10,547	2,39,691 4,03,423
Liquors ... { 1890-91 { 1891-92	234 1,004	5,704 1,806	5,938 3,470	2,77,601 1,00,484
Metals ... { 1890-91 { 1891-92	6,691 17,662	1,04,828 87,133	1,11,519 1,04,005	11,54,910 16,27,855
Ghee ... { 1890-91 { 1891-92	31,191 18,129	984 1,900	32,175 20,028	10,57,753 7,10,994
Salt ... { 1890-91 { 1891-92	14,026 97,873	9,54,021 8,08,559	9,68,047 9,01,462	91,40,153 22,17,069
Saltpetre ... { 1890-91 { 1891-92	2,16,751 2,04,117	1,914 2,322	2,18,665 2,06,439	12,56,346 13,16,049
Linseed ... { 1890-91 { 1891-92	8,22,221 6,56,493	14,411 24,718	8,36,632 6,81,206	33,46,528 28,09,976
Rape seed and mustard { 1890-91 seed. ... { 1891-92	9,65,591 2,76,133	9,589 5,184	3,75,180 2,81,317	15,47,618 11,95,697
Spices ... { 1890-91 { 1891-92	12,714 14,555	75,612 41,897	88,326 56,443	9,37,622 5,83,612
Sugar ... { 1890-91 { 1891-92	43,148 56,993	64,716 76,174	1,07,864 1,31,167	7,58,953 8,52,140
Tobacco ... { 1890-91 { 1891-92	3,52,198 2,59,238	22,433 70,978	3,74,631 3,30,216	1,55,94,016 29,80,667

The total traffic attracted to the Patna-Gaya State Railway during the Patna-Gaya State Railway. past two years, was as follows:—

	Down traffic, or towards Gaya.	Up traffic, or from Gaya.	Total.	
	Mds.	Mds.	Quantity, Mds.	Value, Rs.
1890-91	4,24,979	14,27,335	20,52,314	1,53,82,001
1891-92	9,40,864	16,01,191	25,42,055	1,71,22,339

The chief articles of traffic carried each way during the past two years, are shown in the subjoined statement:—

CHIEF STAPLES OF TRAFFIC.		Traffic towards Gaya.	Traffic from Gaya.	Total.	
				Quantity.	Value.
1		2	3	4	5
		Mds.	Mds.	Mds.	Rs.
Coal and coke ...	{ 1890-91 1891-92	55,432 1,19,930	268 ...	55,690 1,19,990	20,884 44,998
Cotton, raw ...	{ 1890-91 1891-92	4,073 6,117	966 * 284	7,339 6,401	1,37,606 1,16,218
Cotton twist and yarn	{ 1890-91 1891-92	15,738 18,600	46 89	15,834 18,689	6,41,625 6,08,865
Cotton piece-goods (European) ...	{ 1890-91 1891-92	33,469 34,949	96 176	33,564 * 35,123	23,49,480 23,88,304
Ditto (Indian) ...	{ 1890-91 1891-92	1,347 1,320	488 928	1,885 2,246	2,25,705 1,59,448
Gunny bags and cloth	{ 1890-91 1891-92	18,200 21,039	2,766 4,277	20,966 26,316	2,00,630 2,66,818
Wheat ...	{ 1890-91 1891-92	87 4,149	64,798 1,56,947	64,883 1,61,096	1,37,308 4,88,161
Gram and pulse ...	{ 1890-91 1891-92	84,568 1,10,145	1,42,870 2,68,612	2,27,438 3,88,757	5,68,695 9,21,893
Rice ...	{ 1890-91 1891-92	1,621 26,900	2,12,976 1,13,496	2,14,597 1,40,396	5,88,317 4,08,639
Other food-grains ...	{ 1890-91 1891-92	3,450 14,512	48,879 62,740	47,329 77,252	72,298 1,38,199
Hides ...	{ 1890-91 1891-92	103 1,918	9,801 2,792	9,904 4,708	2,74,541 1,49,468
Lac, shell and stick ...	{ 1890-91 1891-92	476 22,071	39,603 28,106	39,079 60,237	10,17,491 13,98,130
Metals ...	{ 1890-91 1891-92	14,638 21,161	2,569 4,416	17,197 26,877	2,01,874 2,32,917
Ghee ...	{ 1890-91 1891-92	87 87	6,098 12,079	7,125 12,166	2,34,234 4,31,858
Other kinds of provi- sions ...	{ 1890-91 1891-92	16,061 20,820	1,660 2,824	17,721 23,644	1,80,062 2,51,068
Salt ...	{ 1890-91 1891-92	1,74,577 1,94,659	314 7,085	1,74,891 * 2,01,743	8,88,395 6,30,447
Linseed ...	{ 1890-91 1891-92	328 157	2,36,964 4,11,067	2,36,312 4,11,244	9,45,248 16,96,382
Rape and mustard seed ...	{ 1890-91 1891-92	387 1,300	52,084 30,081	53,871 31,380	3,20,155 1,33,365
Til seed ...	{ 1890-91 1891-92	8 868	10,344 16,963	10,360 16,849	77,000 67,390
Other oil-seeds ...	{ 1890-91 1891-92	108 2,933	51,007 43,096	51,170 49,027	2,01,777 1,89,759

CHIEF STAPLES OF TRAFFIC.		Traffic towards Gaya.	Traffic from Gaya.	Total.	
				Quantity.	Value.
1		2	3	4	5
		Mds.	Mds.	Mds.	Rs.
Spices ...	{ 1890-91 1891-92	8,710 7,794	2,775 1,404	9,485 9,198	1,13,599 1,20,789
Sugar ...	{ 1890-91 1891-92	45,125 73,233	1,52,575 1,08,939	1,98,301 1,82,171	9,85,594 8,41,489
Stone and lime ...	{ 1890-91 1891-92	7,253 1,36,233	2,51,357 1,85,371	2,68,620 3,11,594	1,34,310 2,83,895
Tobacco ...	{ 1890-91 1891-92	44,174 27,560	3,629 23,868	47,803 52,438	4,47,105 5,97,250

EXTERNAL TRADE OF BENGAL WITH NEPAL, TIBET, SIKKIM, AND BHUTAN.

The arrangements for collecting statistics of the external trade of Bengal with Nepal, Tibet, Sikkim, and Bhutan remained unchanged during the past year.

The total value of this trade registered in Bengal during the past year, as compared with the figures of the previous year, is shown below:—

Total Imports.			Total Exports.			Grand total of traffic registered.		
	1890-91.	1891-92.		1890-91.	1891-92.		1890-91.	1891-92.
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.
From Nepa ...	1,24,80,199	1,00,16,609	To Nepal ...	96,80,232	98,38,024		2,21,79,431	1,98,54,637
.. Tibet and Sikkim.	3,31,473	8,38,303	.. Tibet and Sikkim.	9,32,014	9,30,120		6,54,487	11,68,423
.. Bhutan ...	1,82,069	1,64,892	.. Bhutan ...	1,84,612	1,34,648		3,67,271	3,19,749
Total ...	1,30,03,391	1,10,39,798	Total ...	1,01,97,863	1,03,02,892		2,32,01,189	2,13,42,799

The figures relating to the Nepal trade include statistics of the trade between that State and other provinces which passed through, and was registered at, the registration stations in Bengal. The total value of that trade during the past two years, was as follows:—

Trade between Nepal and other parts of India through Bengal.

YEARS.		Imports into other provinces from Nepal.	Exports from other provinces to Nepal.
		Rs.	Rs.
1890-91	...	3,64,483	2,65,306
1891-92	...	3,04,102	4,67,838

No trade is carried on between the other frontier States and other provinces through Bengal.

Excluding the trade between Nepal and other provinces which only passed through Bengal, the total value of the trade between Nepal and the province of Bengal during 1891-92 is compared below with the figures of the previous year:—

YEARS.		Imports from Nepal.	Exports to Nepal.	Total.
		Rs.	Rs.	Rs.
1890-91	...	1,21,24,713	94,24,926	2,15,49,642
1891-92	...	97,12,501	98,80,188	1,90,92,687

The aggregate value of the past year's trade decreased by 11·40 per cent. and 3·70 per cent. as compared with 1890-91 and 1889-90, respectively. The

import trade showed a falling off of 19·89 per cent. on the returns of the previous year, and of 11·09 per cent. on those of 1889-90. In the export trade, the figures exhibited a decrease of 47 per cent. in comparison with 1890-91, but they were 5·37 per cent. in excess of those for 1889-90.

The greatest decrease in the import trade was in paddy (5,95,619 maunds), rice (4,38,406 maunds), miscellaneous food-grains (91,434 maunds), timber (19,255 maunds), and hides and skins; and the chief items of increase were tobacco, linseed, and mustard seed. In the export trade, European cotton piece-goods showed a falling off of Rs. 4,31,034 in value, while salt showed an advance of 41,906 maunds.

The usual comparative statement showing the total quantity and value of all the principal staples carried both ways during the past two years is appended. The figures shown therein, however, are exclusive of the registered trade with other provinces which passed through Bengal:—

ARTICLES.	QUANTITY.			VALUE.		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
	2	3	4	5	6	7
				Rs.	Rs.	Rs.
Cattle ... No. { 1890-91 { 43,621 8,812 62,433 10,39,556 2,09,628 12,49,184	43,621	8,812	62,433	10,39,556	2,09,628	12,49,184
... { 1891-92 { 40,919 6,094 47,013 10,16,628 1,50,939 11,67,467	40,919	6,094	47,013	10,16,628	1,50,939	11,67,467
Sheep and goats ... " { 1890-91 { 26,090 42,978 69,077 79,690 1,30,671 2,10,261	26,090	42,978	69,077	79,690	1,30,671	2,10,261
... { 1891-92 { 27,056 61,761 88,817 81,168 1,86,283 2,66,451	27,056	61,761	88,817	81,168	1,86,283	2,66,451
Cotton, raw ... Mds. { 1890-91 { 862 6,697 6,359 16,915 1,07,877 1,24,792	862	6,697	6,359	16,915	1,07,877	1,24,792
... { 1891-92 { 907 6,724 6,631 17,007 1,07,808 1,24,815	907	6,724	6,631	17,007	1,07,808	1,24,815
Cotton piece-goods (European) ... Rs. { 1890-91 { 1,02,767 27,11,897 28,14,664	...	...	...	1,02,767	27,11,897	28,14,664
... { 1891-92 { 46,670 22,80,803 23,27,473	...	...	...	46,670	22,80,803	23,27,473
Ditto (Indian) ... " { 1890-91 { 11,183 2,97,278 3,08,461	...	...	...	11,183	2,97,278	3,08,461
... { 1891-92 { 6,747 3,66,663 3,64,310	...	...	...	6,747	3,66,663	3,64,310
Other fibres than jute, raw ... Mds. { 1890-91 { 11,405 ... 11,405 48,471 ... 48,471	11,405	...	11,405	48,471	...	48,471
... { 1891-92 { 36,101 39 36,140 1,53,431 160 1,53,597	36,101	39	36,140	1,53,431	160	1,53,597
Fresh fruits and vegetables ... " { 1890-91 { 26,918 30,643 57,561 3,90,312 4,44,324 8,34,636	26,918	30,643	57,561	3,90,312	4,44,324	8,34,636
... { 1891-92 { 28,620 28,731 57,351 4,14,985 4,16,602 8,31,597	28,620	28,731	57,351	4,14,985	4,16,602	8,31,597
Wheat ... " { 1890-91 { 29,112 761 29,873 78,420 2,006 78,426	29,112	761	29,873	78,420	2,006	78,426
... { 1891-92 { 43,813 2,396 46,209 1,09,000 7,498 1,17,398	43,813	2,396	46,209	1,09,000	7,498	1,17,398
Gram and pulse ... " { 1890-91 { 1,22,955 14,139 1,37,094 2,91,526 34,724 3,26,250	1,22,955	14,139	1,37,094	2,91,526	34,724	3,26,250
... { 1891-92 { 81,247 16,691 97,938 2,03,120 41,753 2,44,873	81,247	16,691	97,938	2,03,120	41,753	2,44,873
Other spring crops ... " { 1890-91 { 43,301 2,422 45,723 97,377 5,461 1,02,828	43,301	2,422	45,723	97,377	5,461	1,02,828
... { 1891-92 { 46,113 6,131 52,244 1,01,506 4,796 1,06,302	46,113	6,131	52,244	1,01,506	4,796	1,06,302
Rice, husked ... " { 1890-91 { 8,79,926 2,276 8,82,202 24,82,391 6,501 24,88,892	8,79,926	2,276	8,82,202	24,82,391	6,501	24,88,892
... { 1891-92 { 4,41,620 17,459 4,68,979 11,82,849 46,901 12,28,750	4,41,620	17,459	4,68,979	11,82,849	46,901	12,28,750
Do., unhusked ... " { 1890-91 { 12,96,506 227 12,96,733 20,60,643 367 20,60,010	12,96,506	227	12,96,733	20,60,643	367	20,60,010
... { 1891-92 { 7,00,887 2,534 7,03,421 10,68,243 3,808 10,72,051	7,00,887	2,534	7,03,421	10,68,243	3,808	10,72,051
Other rain crops ... " { 1890-91 { 2,36,754 185 2,36,939 4,42,039 348 4,42,387	2,36,754	185	2,36,939	4,42,039	348	4,42,387
... { 1891-92 { 1,42,508 2,155 1,44,663 2,67,302 4,040 2,71,343	1,42,508	2,155	1,44,663	2,67,302	4,040	2,71,343
Hides of cattle ... No. { 1890-91 { 51,080 ... 51,080 1,86,242 ... 1,86,242	51,080	...	51,080	1,86,242	...	1,86,242
... { 1891-92 { 30,594 ... 30,594 1,09,281 ... 1,09,281	30,594	...	30,594	1,09,281	...	1,09,281
Skins of sheep, goats, and other small animals ... " { 1890-91 { 84,647 1,300 85,947 1,57,940 2,428 1,60,378	84,647	1,300	85,947	1,57,940	2,428	1,60,378
... { 1891-92 { 30,333 ... 30,333 53,415 ... 53,415	30,333	...	30,333	53,415	...	53,415
Brass and copper ... Mds. { 1890-91 { 707 15,238 15,945 26,277 5,44,758 5,70,035	707	15,238	15,945	26,277	5,44,758	5,70,035
... { 1891-92 { 192 16,643 16,835 6,863 6,69,239 6,66,102	192	16,643	16,835	6,863	6,69,239	6,66,102
Iron ... " { 1890-91 { 505 16,842 11,347 3,739 81,316 85,104	505	16,842	11,347	3,739	81,316	85,104
... { 1891-92 { 179 26,733 26,912 1,845 2,00,501 2,01,346	179	26,733	26,912	1,845	2,00,501	2,01,346
Opium ... " { 1890-91 { 383 ... 383 3,51,737 ... 3,51,737	383	...	383	3,51,737	...	3,51,737
... { 1891-92 { 215 ... 215 1,97,450 ... 1,97,450	215	...	215	1,97,450	...	1,97,450
Ghee ... " { 1890-91 { 6,051 ... 6,051 1,96,670 ... 1,96,670	6,051	...	6,051	1,96,670	...	1,96,670
... { 1891-92 { 6,166 ... 6,166 2,02,660 ... 2,02,660	6,166	...	6,166	2,02,660	...	2,02,660

ARTICLES.		QUANTITY.			VALUE.		
		Imports.	Exports.	Total.	Imports.	Exports.	Total.
1		2	3	4	5	6	7
					Rs.	Rs.	Rs.
All other kinds of Mds. { 1890-91		40,064	71,818	1,11,873	4,80,643	8,61,816	13,42,464
provisions ... " { 1891-92		37,575	76,864	1,14,439	4,50,900	9,22,968	13,73,268
Salt ... " { 1890-91		470	1,15,871	1,16,341	1,763	4,84,617	4,86,290
" " { 1891-92		683	1,57,777	1,58,360	2,168	5,91,664	5,93,832
Saltpetre ... " { 1890-91		12,112	...	12,112	65,122	...	65,122
" " { 1891-92		15,016	20	15,036	86,947	120	87,067
Linseed ... " { 1890-91		1,82,505	...	1,82,505	5,25,597	...	5,25,597
" " { 1891-92		1,83,299	...	1,83,299	7,42,322	...	7,42,322
Mustard seed ... " { 1890-91		1,67,287	283	1,67,570	7,10,972	986	7,11,958
" " { 1891-92		2,23,100	230	2,23,330	9,27,158	949	9,28,107
Silk, manufactured Rs. { 1890-91		...	...	...	7,493	1,10,812	1,17,796
" " { 1891-92		...	...	...	7,698	51,976	59,674
Betel-nuts ... Mds. { 1890-91		115	16,475	16,590	1,035	1,48,275	1,49,310
" " { 1891-92		48	18,033	18,101	612	1,62,297	1,62,909
Spices ... " { 1890-91		8,501	18,501	27,002	3,18,789	6,93,738	10,12,527
" " { 1891-92		19,499	24,432	34,951	3,93,716	9,16,953	13,10,669
Sugar, refined ... Mds. { 1890-91		109	11,677	11,786	1,117	1,27,764	1,28,881
" " { 1891-92		...	14,760	14,760	...	1,75,536	1,75,536
Do., unrefined ... " { 1890-91		353	51,306	51,659	1,535	2,21,593	2,23,128
" " { 1891-92		401	52,591	53,092	2,427	2,54,347	2,56,774
Tobacco ... " { 1890-91		23,181	45,069	68,240	2,28,643	3,06,183	5,34,825
" " { 1891-92		79,254	42,126	1,21,379	5,92,379	2,22,389	8,14,868
Timber ... " { 1890-91		1,26,820	...	1,26,820	2,63,804	...	2,63,804
" " { 1891-92		1,07,565	...	1,07,565	2,16,495	...	2,16,495
Wool, manufactured Rs. { 1890-91		...	...	...	18,208	1,10,432	1,28,726
" " { 1891-92		...	...	...	17,161	81,208	98,369
Silver ... " { 1890-91		...	...	...	8,57,608	1,82,376	10,39,979
" " { 1891-92		...	...	...	6,38,268	2,11,972	8,50,270

As heretofore, the registration of the trade of Bengal with Tibet and Sikkim was effected at Pedang, Ranjit, and Laba in the Darjeeling district. All these stations were kept open throughout the year. The total value of the past year's traffic is compared below with the figures of the previous year:—

	Trade with Tibet.		Trade with Sikkim.	
	1890-91.	1891-92.	1890-91.	1891-92.
	Rs.	Rs.	Rs.	Rs.
Imports into British territory	1,80,898	6,18,146	1,50,590	2,20,157
Exports from ditto	1,99,788	2,03,131	1,23,228	1,28,889
Total	3,80,686	8,21,277	2,73,808	3,47,140

The foregoing figures speak for themselves. The great advance in the imports from Tibet was due to the increased feeling of security, and to the development of the traffic in raw wool, musk, and yak-tails. A large consignment of gold, valued at Rs. 2,88,000, was, for the first time, registered during the past year. The supply was brought down loaded on mules for sale by two wealthy traders of Lhasa. The Deputy Commissioner, however, believes that the value has been enormously exaggerated in the return. In the case of Sikkim, the increase in the imports therefrom was due to large consignments of food-grains

and fresh fruits and vegetables. The total value of the chief items comprised in the import trade as registered during the past two years, is given below :—

Imports from Tibet.

	1890-91.	1891-92.		1890-91.	1891-92.
	Rs.	Rs.		Rs.	Rs.
Gold ... ..	...	2,88,000	Wool, manufactured		
Wool, raw	64,829	1,77,306	(Indian)	14,428	18,621
Yak-tails	44,795	68,317	Tea, foreign	9,023	4,277
Musk	16,091	37,839	Silk, manufactured		
Horses, ponies, and			(Indian)	1,978	9,170
mulas	31,500	17,550			

Imports from Sikkim.

	1890-91.	1891-92.		1890-91.	1891-92.
	Rs.	Rs.		Rs.	Rs.
Other rain crops ...	58,119	84,866	Silver	3,835	7,229
Fresh fruits and vege-			Hides of cattle ...	4,505	6,457
tables	36,716	66,006	Cotton piece-goods		
Gram and pulse ...	14,831	19,803	(Indian)	2,740	3,423
Brass and copper ...	15,695	17,519			

In the export trade, the demand for cotton and woollen piece-goods, salt, tobacco, and other articles was steady. The following statements show the principal articles exported to Tibet and Sikkim during the past two years :—

Exports to Tibet.

	1890-91.	1891-92.		1890-91.	1891-92.
	Rs.	Rs.		Rs.	Rs.
Cotton piece-goods			Earthenware and porce-		
(European)	69,564	72,077	lain	5,961	4,818
Wool, manufactured			Other metals	2,914	4,371
(European)	23,500	31,923	Iron	3,076	4,121
Indigo	15,395	16,066	Shell-lac	2,683	2,961
Tobacco	5,481	9,986	Paints and colours ...	6,019	2,870
Brass and copper ...	10,763	8,402	Fresh fruits and vege-		
Silver ... ..	...	6,120	tables	1,080	2,467
Cotton twist and yarn					
(European)	4,410	5,880			

Exports to Sikkim.

	1890-91.	1891-92.		1890-91.	1891-92.
	Rs.	Rs.		Rs.	Rs.
Cotton piece-goods			Woollen piece-goods		
(European)	30,273	36,215	(European)	2,875	6,355
Rice, husked	25,478	21,420	Spices other than betel-		
Salt	8,677	11,671	nuts	4,276	5,252
Tobacco	9,369	8,222	Mineral oil	3,389	4,398
Provisions other than			Other kinds of living		
ghee	7,296	7,128	animals	3,090	3,780
Fresh fruits and vege-			Cotton twist and yarn		
tables	6,846	6,644	(European)	1,696	3,276
			Cattle	619	2,575

The trade between Bengal and Bhutan was, as usual, recorded at Ambari, Trade between Bengal and Bhutan. Buxa, and Hantupara, in the Jalpaiguri district, and at Pedang and Laba in the Darjeeling district. The total value of the trade registered during the past two years, is shown below :—

	Imports from Bhutan.	Exports to Bhutan.	Total.
	Rs.	Rs.	Rs.
1890-91	1,82,859	1,84,612	3,67,371
1891-92	1,84,803	1,34,848	3,19,740

The fluctuations have not been very violent. It is, however, noticeable that a considerable supply of fresh fruits and vegetables was imported into British territory from Bhutan during the past year. The following statement

shows for the past two years the total value of the principal articles in the export trade between Bengal and Bhutan:—

Imports from Bhutan.

	1890-91.	1891-92.		1890-91.	1891-92.
	Rs.	Rs.		Rs.	Rs.
Wool, raw ...	67,974	49,925	Horses, ponies, and mules ...	8,910	11,520
Fresh fruits and vegetables ...	4,206	44,603	Yak-tails ...	12,855	7,920
Wool, manufactured (Indian) ...	31,692	28,214	Ghee ...	4,333	4,932
Wax ...	22,289	14,794	Cattle ...	2,444	3,126
Musk ...	18,565	13,118	Cotton piece-goods (Indian) ...	4,154	3,067

The abstract below shows the value of the chief articles of traffic registered as exported to Bhutan during the past year, as compared with the total of the preceding year:—

Exports to Bhutan.

	1890-91.	1891-92.		1890-91.	1891-92.
	Rs.	Rs.		Rs.	Rs.
Cotton piece-goods (European) ...	49,322	37,428	Cotton twist and yarn (European) ...	7,066	3,012
Betel-nuts ...	38,368	29,304	Iron ...	4,186	3,600
Rice, husked ...	28,142	17,242	Silk, manufactured (Indian) ...	3,745	3,173
Tobacco ...	20,230	16,131	Sugar, unrefined ...	2,751	2,520
Brass and copper ...	8,937	8,474	Dyeing materials, other kinds ...	630	2,154
Wool, manufactured (European) ...	12,951	8,431			

PUBLIC WORKS.

Roads and Buildings.

THE outlay of the year 1891-92 on Civil and Military works amounted to Rs. 89,93,859. The expenditure under the various service heads is shown in the following table compared with the grants of the year:—

SERVICE HEADS.	ORIGINAL WORKS.		REPAIRS.		TOTAL.	
	Grant.	Outlay.	Grant.	Outlay.	Grant.	Outlay.
<i>Imperial.</i>	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Military Works—						
Works	12,400	12,159	28,200	24,078	40,600	36,235
Establishment ... ..	...	...	...	...	8,360	8,334
Tools and Plant ... ..	...	...	...	...	850	461
Total Military Works ...	...	...	...	...	50,800	43,610
Civil Works—						
Works	5,68,900	5,85,133	1,17,900	1,19,622	6,86,800	7,04,755
Establishment ... ..	...	...	...	...	1,10,100	1,06,905
Tools and Plant ... ..	...	...	...	...	7,000	7,997
Suspense Accounts ... ..	...	...	...	...	...	—13,867
Expenditure in England ...	...	...	...	...	—64,800	—81,602
Loss by exchange ... ..	...	...	...	...	—28,300	—28,752
Total Civil Works ...	...	...	...	...	7,10,900	7,17,438
Total Imperial ...	...	...	...	...	7,61,500	7,61,048
<i>Provincial.</i>						
Civil Buildings	11,29,500	10,70,822	5,08,000	4,94,687	16,37,600	16,65,509
Communications	5,83,600	5,53,740	6,44,000	6,27,663	12,28,600	11,81,303
Miscellaneous Public Improvements	90,000	59,521	68,000	66,743	90,000	1,36,284
Establishment ... ..	...	...	...	...	7,34,000	7,84,601
Tools and Plant ... ..	...	...	...	...	45,000	32,816
Profit and Loss ... ..	...	...	...	...	...	...
Suspense Accounts ... ..	...	...	...	...	4,000	2,09,801
Total Provincial ...	...	...	...	...	37,43,000	38,80,194
<i>Local Funds.</i>						
Incorporated Local Funds ...	...	...	...	...	...	...
Excluded Local Funds ...	11,800	7,418	...	...	(a) 13,300	(a) 9,327
District Road Funds ...	...	13,61,042	...	22,40,669	...	(a) *43,64,160
Contributions—						
Civil Works { Imperial ...	...	...	12,733	6,866	12,763	6,866
{ Provincial ...	97,923	56,663	16,889	11,290	1,14,762	(a) 72,366
Total Contributions ...	...	...	...	...	1,27,525	79,232
Total Local Funds ...	...	...	...	...	...	43,62,616
GRAND TOTAL ...	...	...	...	...	...	89,93,859

(a) Inclusive of the charges for establishment and tools and plant.

		Rs.
* Expenditure on road works in districts not subject to the operations of the Bengal Local Self-Government Act	...	2,30,379
Ditto ditto in districts subject to ditto ditto	...	40,43,688
Total	...	42,64,100

IMPERIAL WORKS.

The construction of the new block of buildings to accommodate the following offices under the Government of India—
New Imperial Secretariat Building, Calcutta. Public Works Department, Home Department, Revenue and Agricultural Department, Board of Examiners, and Thagi and Dacoity Department—was brought to completion in October 1891, in time to allow of its occupation when the offices returned to Calcutta from the hills. The Imperial Library, which formed an important part of the project, was also completed, and provided with suitable shelves and furniture. Easy access is now afforded to the extremely valuable and interesting collection of books and papers which have been brought together, and carefully arranged in this building.

Owing to the reconstruction of the Government of India offices referred to above, and their being designed in continuation of, and in keeping with, the Financial buildings, it was found that the latrines at the north end of the latter for the use of employés in those offices were objectionable on account of their proximity to the new offices: it was consequently decided to close them, and provide ample accommodation on the roof of the Financial buildings; the new structure for this purpose was commenced and completed during the year under review.

An important improvement in the redecoration of the walls and ceilings of the marble and breakfast halls at Government House, Calcutta, was carried out: the new design, which was specially approved, was executed in cream and gold, and was a decided improvement on the former multi-coloured decoration.

Special repairs and Alterations having been found necessary in connection with the several buildings comprised in the
Katmandu Residency. Residency at Katmandu in Nepal, estimates aggregating Rs. 49,213 for some of the works, including a new house for the clerk attached to the Residency, were sanctioned; the works were put in hand and Rs. 49,214 were expended before the end of the year.

At the General Post-office, Calcutta, one of the east staircase blocks was converted into rooms for the Controller's office.
Postal. A new post-office was constructed at Satkhira on the model of the post-office at Chandbally, and the new combined post and telegraph office at Krishnagar, which had been begun just before the close of the last official year, was carried on to completion. The rebuilding of the post-office and post-master's quarters at Nalhati on curbs of plate iron as a precaution against the peculiar effects of the soil at that place, which had been partly carried out in 1890-91, was continued and finished. At Berhampore the post and telegraph office was removed from barrack No. 5, which was required for the extension of the lunatic asylum, to more commodious rooms in barrack No. 11. Accommodation for the post-office at Hazáribágh, which had been located in a hired building, was found in the old officers' quarters which were suitably altered for the purpose, and at Mymensingh and also at Dumka, additions and alterations were made to the post-office building to adapt it as a combined office for postal and telegraph purposes. The work of raising the roof and floor of the Utterpara post-office was partly carried out.

A new iron moulding shop was constructed in the telegraph storeyard at Dullunda, and some minor works were carried out at the Central Telegraph office at Calcutta.
Telegraph. At Bardwan skylights were provided in the telegraph office, and at Midnapore some additions were made to the telegraph masters' quarters.

Some additions to the opium godowns at Ekdari in the Champaran district which were reported as nearly completed in the previous year, were finished. At the Goolzarbagh
Opium. some vats were constructed of stone slabs and a small addition was made to the main godown. A bungalow at Pupri in North Tirhut was taken over at a valuation of Rs. 3,500 from the Bengal-North-Western Railway Company for the accommodation of opium officers during weighments.

The construction of the hospital buildings for the native regiment stationed at Cuttack was in progress during the year, and the outlay on the work up to the 31st March 1892 was Rs. 10,540. The main building was carried up above plinth level, and work is being actively pushed on. A revised estimate for the hospital and its subsidiary buildings, prepared in accordance with the modifications desired by the Government of India, was sanctioned in March 1892. The revised estimate amounted Rs. 23,344.

In connection with khedda operations at Dacca, a road was constructed from the Peelkhana to the Satmusjid Jheel, and only turfing remained to be done to it.

The fort at Gnatong was thoroughly repaired at a cost of Rs. 5,000.

An estimate, amounting to Rs. 5,464, was sanctioned for the construction of a barrack at Furnea for the accommodation of recruits for the Burma and Assam Military Police and the Chittagong Hill Tracts Police, as well as for the army, to meet the cost of which a special grant of Rs. 4,760 was made by the Government of India, Military Department, and the balance of Rs. 704 was contributed by the Bengal Government from Provincial funds.

A scheme for a Roman Catholic church at Saidpur received the approval of Government.

PROVINCIAL WORKS.

The table below shows the outlay that has been incurred under each department of the administration:—

CIVIL BUILDINGS.				
<i>Provincial Services (Imperial).</i>				
		Rs.	Rs.	Rs.
Admini- stration.	Land Revenue. { Court-houses, Treasuries, and Record-rooms ...	2,05,994	97,461	3,03,445
	{ Circuit-houses ...			
	Excise buildings ...	1,677	939	2,016
	Residence for Local Government ...	32,545	31,777	64,322
	Secretariat offices ...	5,988	18,417	24,435
Minor Depart- ments.	Board of Revenue buildings ...	3,990	6,948	10,338
	Stamp and Stationery ...	401	664	1,145
	Museum buildings ...	79,200	2,835	81,835
Law and Justice.	Monuments and Antiquities ...	4,837	1,375	6,212
	High Court buildings ...	527	4,389	4,916
	Small Cause Court buildings ...	30,808	1,965	32,766
Ecclesi- astical.	District (Subdivisional) Court buildings	2,78,421	1,39,329	4,11,650
	Churches ...	4,174	25,737	29,911
	Burial-grounds ...	5,059	7,797	12,856
	Lord Bishop's Palace ...	215	641	857
<i>Provincial Services (Provincial).</i>				
Jails ...	Central Jails ...	48,997	19,394	68,291
	District " ...	43,860	76,390	1,20,240
	Lock-ups ...	85,128	12,690	97,818
Police ...	...	1,01,870	50,421	1,52,291
Educa- tional.	Government Colleges ...	20,213	31,901	52,114
	Ditto Schools ...	3,15,350	51,982	3,67,332
Medi- cal.	Hospitals and Dispensaries ...	99,480	31,463	1,30,923
	Medical Colleges and Schools ...	2,990	981	10,971
	Lock-hospitals ...	2,701	2,164	4,865
Customs buildings	Lunatic Asylums ...	19,102	8,306	27,408
	...	973	4,246	5,229
Miscel- laneous.	Registration ...	9,669	3,375	13,044
	Public Works buildings ...	11,757	15,805	27,062
	Miscellaneous or general ...	25,206	25,739	51,994
Total Civil Buildings		14,46,185	6,68,099	21,14,273

The construction of new buildings to accommodate the Commissioner of the Presidency Division, the Collector of Calcutta, and the Collector of Income-tax was decided upon towards the beginning of the official year: the

offices of the two former are at present located in hired buildings, and by concentrating the three offices, there will be a gain in convenience both for the offices and the public. The site selected was that formerly occupied by a portion of the old opium godown abutting on Dalhousie Square. Work was begun in August 1891, and by the end of March 1892 the walls had been carried up to parapet level, but for want of the iron-work ordered from the Stores Department of the India Office, progress was stopped. The building, which is three-storeyed on the principal face, is designed in the Renaissance style of architecture, and is being constructed in brickwork, with terra-cotta ornamentation.

In the course of excavating for the foundations of this building, a number of old walls were met with, which led to some interesting and much-needed information being got together in regard to the old Calcutta Fort, and the exact situation of the famous Black Hole.

This important institution has for years past been occupying hired and very inconvenient buildings in Bow Bazar Street: the necessity for a better building and a more central position for the school, as well as for a picture gallery, had been recognized, and it was decided to erect a new structure on the grounds of the Museum at the back of the building known as the annexe, which it is intended to convert into a picture gallery. The premises No. 29, Chowringhee, originally acquired as a site for this institution, were utilized for another purpose. The new school building, which is to be a three-storeyed structure in brickwork designed in a phase of Renaissance, was begun in January 1892, and had progressed up to first floor level by the end of the year under review. The accommodation to be provided includes, besides class-rooms and a photographic studio, a residence for the Superintendent of the School, who will also be Curator of the picture gallery.

The Small Cause Court extension, which was referred to in last year's report as being well advanced towards completion, having been begun in January 1890, was pushed on with and got ready for occupation during the October vacation, at the end of which the new portion was fully utilized. The cost of the extension was Rs. 1,11,549.

This large block of buildings which has been erected on Fairy Hill at Chittagong, and in which all the Courts and Government offices are concentrated, was completed and occupied during the year. It occupies a commanding position, overlooking the harbour, and is two-storeyed throughout.

The Sudder Street extension of the Indian Museum, built for the express purpose of providing room for economic, art, and ethnological exhibits, was provided with show cases specially designed and constructed to suit the new Courts. The structure itself was noted as having been completed during the previous year. The work of arranging the specimens is now in hand. Accommodation for servants in new quarters outside was also provided, and the latrines for the public visiting the museum and the supply of drinking-water were improved.

Several improvements were effected on the Calcutta Maidan, including the Strand Road and Eden Gardens, during the year. The old masonry aqueduct which ran round the south side of Government House was removed, and pipes were laid along the road instead to supply water for watering purposes. The Strand Road was considerably improved by alterations in alignment, and by the addition of a foot-path on the side towards the river. The electric lighting arrangements at the Eden Gardens were being overhauled, with a view to the more satisfactory illumination of this popular place of resort. A bronze pedestrian statue of Lord Dufferin, the last work of the late Sir Edgar Boehm, R.A., was erected in a central position, and unveiled by His Excellency the Viceroy.

The experiments made in the Madras Presidency as to the possibility of inducing rainfall by explosions of dynamite naturally attracted considerable attention in so dry a season as that which Bihār suffered from since September 1891, and

an attempt was made to institute similar experiments in the Musaffarpur district under the supervision of Mr. O. C. Lees, the Executive Engineer of the Gandak Division. As there are no hills in Bihār from which the explosion could take place, it was necessary to rely on artificial elevation in the first instance. A series of five charges were discharged, each consisting of 20 pounds of dynamite, suspended from a light wire rope at a height of about 25 feet from the ground. The charges were spaced about 25 feet apart and exploded at intervals of between 5 and 10 minutes, but no favourable result ensued. It was then proposed to send up the charges in balloons, and the medium of large hot air balloons, in the construction of which a class of people in Bettiah are particularly skilful, was tried; of the two sent up one caught fire, and the other was unsuccessful. It was then suggested to use captive hydrogen balloons, but by this time the atmosphere had become so extremely dry that it seemed useless to carry on the experiments any further.

One of the chief difficulties experienced in Bengal in the management of the jails has always been to find sufficient and suitable labour for the prisoners, specially for those in district jails, who are usually sentenced for short terms only. The Lieutenant-Governor frequently found strong adults employed on such tasks as spinning cotton into thread, weaving mats, &c., which hardly involve any labour at all, at the same time that bodies of free labourers were being paid by the Public Works Department for making bricks or tiles, stone-breaking and surki-pounding. Accordingly, it has been laid down that jail labour shall be employed on works of this kind by the Public Works Department and by the District Engineer, whenever it can be utilized properly, as well as in building operations and repairs within the jail boundaries. As regards extramural employment, jail labour will be utilized in large buildings and earthwork at a distance of not more than two miles from the jail, under such conditions and safeguards as the jail authorities will from time to time see fit to lay down.

The new Collectorate record building at Noakhali which had been nearly completed, but was made over temporarily for the accommodation of the Census office, and vacated by them in September 1891, was finished off, and made over to the Collector. A new subdivisional court-house was under construction at Tangail at an estimated cost of Rs. 25,491, and was approaching completion. The work of providing additional accommodation to the Collector's Court at Midnapore, at an estimated cost of Rs. 23,816, which had been begun in the previous year, was completed; eight additional iron racks were also supplied for the Record Department in this building at a cost of Rs. 2,565. At Darbhanga the Collector's *ijlash* was enlarged, and at Gaya the treasury room of the Collectorate was added to and improved: additions which were being made in the Collectorate at Arrah were completed. Certain additions and alterations to the treasury building at Cuttack, which were noted in last year's report as being partly done, were finished off at a cost of Rs. 8,753, and at Puri the guard-house was converted into a treasury building at a cost of Rs. 4,118. The much-needed sub-treasury at Khurda, the construction of which had been begun during the previous year, was completed at a cost of Rs. 2,068. The Deputy Commissioner's new Court-house at Dumka, which had been constructed during 1890-91, was fitted with *ijlashes*, record racks, punkhas, &c. At Purnea some of the Court buildings were paved with Mirzapore stone; some new record racks and counters were also supplied to the *tauzi* and account departments in the Collectorate at that place. Some rooms were added on to the Subdivisional Court-house at Jajpur. At Somastipur certain alterations were made in the Subdivisional Court-house, with a view to providing a *hajet* and tent godown, and otherwise improving the building. The construction of a *khas takmil* record-room at Pattya in the Chittagong district was begun and completed during the year; and some minor improvements were effected in the *khas takmil* office at Cox's Bazar. Minor additions and alterations were made in the Collector's Court-houses and residences at Dacca, Mymensingh, Barisal, and Faridpur. The want of additional accommodation for the Subdivisional Court and office at Serampore had been much felt, and it was decided to convert the subdivisional residence there, which was much too large for living purposes, into public

offices; this work was carried out during the year, and the Subdivisional Officer was allowed to hire a suitable house as a residence. The house at Purulia, known as Mr. Clay's house, was purchased for Rs. 10,000 for the official residence of the Deputy Commissioner. At Bogra three houses belonging to a Mr. Taylor were also purchased, one of them being required for a residence for the Collector. A house and the land belonging to it, the property of the Maharaja of Bettiah, were acquired for an official residence at Chapra at a cost of Rs. 13,864, and the construction of a bungalow for the Assistant Magistrate here which had been in progress was completed. The question of building residences for Subdivisional Officers stationed at outlying places where there is no suitable house accommodation engaged the attention of Government; these officers receive a house allowance of Rs. 50 a month when residences are not provided for them, and as it was found possible to build suitable houses at a reasonable cost, the more urgent cases were being taken up: one at Thakurgaon and another at Netrakona were under construction, and the requirements of other places were being considered.

Circuit-houses. The remodelling of the circuit-house at Chapra, shown as in progress in last year's report, was proceeded with, and completed. Some minor works were carried out in connection with the out-buildings attached to the circuit-house at Malda, and new out-houses were built for the circuit-house at Buxa.

Excise. Under orders issued by the Local Government, the various excise buildings borne on the books of the Public Works Department were transferred to the Excise Department in October and November 1891. Previous to that, the distillery buildings at Chapra were provided with a system of pipes to carry water to the still-heads for cooling purposes.

Board of Revenue buildings. The erection of a new iron portico and certain other works of improvement to the Board of Revenue office at Calcutta were completed. Also was the construction of a building for the Salt Rowanah office.

Police. The new Police Courts at Calcutta, the construction of which had been completed during the previous year, were supplied with the necessary furniture and fittings; a few improvements were also made with the view of more effectually lighting and ventilating some of the rooms, and in the lock-up adjoining some minor alterations and additions were carried out. Land was also acquired in Chattawalla Lane for a latrine for the use of the public frequenting the Police Courts and of the town guard. The building of a new city police station at Dacca, which had been begun in January 1891, was completed in October; a new police *thana* at Shaikpura was under construction and was nearly completed. At Chaibassa a new police barrack had to be erected in place of the old barrack sheds, which were in a dilapidated condition, and a new police magazine was built to replace the old, unsuitable structure. New quarters for the police were built at Somastipur in the Darbhanga district; also for the constables attached to the *thana* at Puri, at which place a new sadar police-station and Sub-Inspector's quarters were built. New quarters were also built for the police guard at Alipore, and at Dacca the supply of filtered water to the Mill Barracks, occupied by the Reserve police, was carried out. The hospital in the Reserve police lines at Chinsura was being rebuilt on a larger scale, as the old hospital was low and ill-ventilated, and did not provide sufficient accommodation; a new police hospital with out-houses was also in progress at Gaya, and at Howrah one end of the police hospital was converted into a cholera ward, sunshades being provided along the south side of the building. Some additions were made to the Charitable Dispensary at Darjeeling to provide hospital accommodation for the Darjeeling Police Force. The premises No. 29, Chowringhee, which had been acquired for the new School of Art, was made suitable as an official residence for the Commissioner of Police at Calcutta, another site having been selected for the School of Art. The house at Mymensingh, formerly belonging to Mr. Charles, was purchased in order to secure a residence for the District Superintendent of Police stationed there, and at Bogra a new bungalow for a similar purpose which had been under construction was completed. New dead-houses were built at Dum-Dum and Khulna, one was in

progress at Arrah, and at Bettiah materials were being collected with a view to the early construction of one at that place.

The construction of the Judge's new Court-house at Noakhali, work on which had been begun in March 1890 and was temporarily stopped for want of iron joists indented for from England, was resumed in September 1891, and pushed on towards completion, the tiled flooring and a few finishing items only remaining to be done. Extra iron racks were provided in the Judge's record-room at Chapra; those which had been under construction at the Judge's Court-house at Muzaffarpur were completed; and the work remaining to be done in the additional record-room for the Judge's Court-house at Arrah was completed. The thatched roof of the Sub-Judge's Court-house at Burdwan was replaced by Raniganj tiles, as under the Municipal bye-laws in force there the construction and renewal of thatched roofs are prohibited. The construction of a Court-house for the Sub-Judge at Jalpaiguri, which had begun in November 1890, was completed.

The subjoined statement shows the progress made during the year in providing improved accommodation for Munsifs' Courts:—

Name of place.	Number of Courts, &c.	Progress made and remarks.
Nilphamari	Treble	Completed.
Kurigaon	Do.	Ditto.
Manikganj	Do.	• Ditto.
Bhanga	Do.	Under construction.
Kasba	Single to double	Three-fourths done.
Narayanganj	Ditto	Completed.
Kalna	Extension of single	For additional Munsif, about to commence.
Contai	Ditto	For additional Munsif, completed.
Monghyr		Additional accommodation, completed.
Phulbari		Ditto ditto.

The manufacture of bricks for the double Munsifi which it is proposed to build at Bolpur was completed at a cost of Rs. 3,130. At Hatya the construction of a corrugated iron record-room for the Munsifi was begun; improvements were also made to the tank in the Munsifi compound, and the earth excavated was utilized in raising an embankment five feet high round the Court-house. A new corrugated iron record-room for the use of both the Munsifs at Chikandi was under construction, and a new building for the Nizarat and copying departments in connection with the Munsifi at Rajbari was completed. Several minor works were carried out, including the provision of record racks in the Bagerhat Munsifi, the construction of a Malkhana, Nazir's office and witness-room for the Gaibanda Munsifi, and alterations, &c., to the Munsifi's Court at Berhampore. Estimates for constructing new Munsifs at Fenny and Satkhira and for extending the existing single Munsifi at Hathazari were sanctioned, and work was to be taken in hand in 1892-93. The standard plans for Munsifs, which had been in use for some years, were thought to provide for too costly a description of building, and it was therefore decided to prepare type plans for structures of a more economical kind. This question was approaching settlement at the end of the year under review.

The compound of the Buxar Church was fenced in with stone posts and wire railing, and at Purnea some minor alterations were made in the church with a view to improving the ventilation. A lightning-conductor was fixed to the church at Puri. The construction of an enclosure wall, with gate, round the new cemetery at Madhupur, in the Sonthal Parganas, was commenced but not completed, and the provision of a new cemetery at Chakardharpur for the European staff of the Bengal-Nagpur Railway was in hand. At Calcutta the question of establishing a new Christian cemetery in the vicinity of the one in Lower Circular Road at present in use received the attention of Government, and a project for it is now under consideration.

At the Buxar Central Jail a new roof, consisting of double Allahabad tiles on a framing of *sal* timber, was erected over the workshed: a godown and shed for the storage and washing of soiled blankets were constructed outside the central jail at Bhágampur; verandahs were also added on the south side of ward No. 1, and to the warders' quarters at this jail, and at Midnapore a well was sunk in a locality known as Balashahib, and provided with a pump and the necessary piping for the supply of water to the central jail. A new under-trial ward was under construction at the Dacca Central Jail, and some additional works were carried out in connection with the Jail Superintendent's quarters at this place. At the Alipore Jail the floor of the *gunny* godown, the main entrance gate, and the verandah of the Deputy Superintendent's quarters were improved, and a new rice shed constructed. Certain portions of the compound wall of the Presidency Jail were raised. The work remaining to be done in repairing certain buildings in the district jail at Jessore was completed, and the buildings taken over on the Public Works Department books. At Muzaffarpur a new work-shed with a corrugated iron roof was built to replace the old shed, which was very dilapidated.

Various improvements were made in the district jails at Chapra, Gaya, Mithapur (Bankipore), and Arrah; at Malda, also, additions and alterations were in progress in order to improve the accommodation and ventilation of the jail; a portion of the enclosure wall of the Burdwan Jail, which had been blown down during a storm in May 1891, was rebuilt, and some minor works were carried out in this jail as well as in the district jails at Monghyr, Purnea, and Suri, and the intermediate jails at Bankura and Dumka. A new intermediate jail was under construction at Daltonganj, the head-quarters of the newly-formed Palámau district, and was approaching completion. The female ward of the Balasore Jail had to be altered, and the walls round it raised to prevent the escape of prisoners.

New 1st class lock-ups were under construction at Fenny, Thakurgaon, and Alipur (Duars), and the 1st class lock-up at Manikganj and the 2nd class lock-ups at Nangaon and Nilphamari, which were in hand last year, were carried on to completion. The male and female wards of the Katwa lock-up, which had been completed last year, were rebuilt at a cost of Rs. 3,157 on curbs of plate iron, rendered necessary on account of the peculiar nature of the soil. A masonry enclosure wall was being substituted for the bamboo palisade round the lock-up at Kajbari, and store and office rooms were added at Jajpur. The subsidiary jail at Munshiganj was reconstructed and that at Jamálpur was altered and added to: the floors of the lock-up at Sitamarhi were asphalted, and materials were collected for the proposed additions to the subsidiary jail at Brahmanbaria. New quarters for warders were built in front of the Khurda lock-up.

The construction of a new combined Bhutia and zillah school at Darjeeling was begun in January 1892 and half completed; the zillah school at Dumka was enlarged by the addition of two rooms, and increased accommodation was also provided in the Government schools at Purnea and Purulia by adding another room in each case. A new building for the zillah school at Khulna was commenced in July 1891 and completed during the year: it is a masonry structure designed to harmonize with the other buildings recently erected at this place. At the Sibpur Civil Engineering College the new model and testing room which had been begun in 1890-91 was still not quite finished, and some improvements were carried out to the river frontage in connection with the foreshore road; rain-water pipes were also supplied to the main building to replace ordinary spouts, besides which some minor works were carried out, and a cricket shed was also erected in the play-ground. At the Bethune School the new quarters for students were quite completed; some other improvements were also effected. Filtered water, the supply of which has now been extended to Alipore and Kidderpore, was laid on to the Upper and Lower Military Orphan Schools at the latter place, and efficient lightning-conductors were provided to the Presidency and Sanskrit Colleges and the Hare School. Additional accommodation was provided in the Calcutta Senate House, the cost being met from funds contributed

by the University authorities: at Rajshahi a new building in connection with the Arabic Madrasa was constructed from funds contributed for the purpose.

At the Medical College, Calcutta, a block of latrines very much needed for the wards on the west side of the hospital was taken in hand and completed with all its sanitary fittings at a cost of Rs. 15,113; a two-storeyed block of servants' quarters had to be adapted to provide additional room for the nurses attached to the hospital, and other additions and alterations were made to several of the buildings comprised in this institution. The remodelling of the sanitary arrangements at the Eden Hospital on modern principles had become very necessary, and was effected before the close of the year at a cost of Rs. 6,587. A much-felt want was supplied at the Campbell Hospital by the construction of a separate building for the out-patient department, the cost of which amounted to Rs. 10,880. A new cook-room, also a dead-house, had to be built for the Ezra Hospital, owing to the old buildings having had to be dismantled to make room for the Eye Infirmary built from funds liberally contributed by the late Babu Shama Churn Law, after whom this ophthalmic institution is named. A compound wall and gate were put up along the front of this building, which was also supplied with necessary furniture and fittings. The contagious diseases ward at the Presidency General Hospital was altered and added to, some drainage works were carried out, and other improvements effected. A hospital block was built in connection with the Dow Hill School at Kurseong, the cost incurred being Rs. 5,477. A residence for the Lady Doctor at Gaya in connection with the Gaya branch of the Lady Dufferin Fund was being constructed from funds contributed for the purpose. Quarters for the use of the Superintendent of the Alipore Lock Hospital were purchased from the heirs of Sheik Mungloo, the late Superintendent. The construction of a European ward in the compound of the Mitford Hospital at Dacca, towards which a sum of Rs. 11,222 was contributed from the Barjon and Pogose legacies, was in hand. Rupees 5,917 were expended in the construction of an animal vaccination depôt at Ghoom.

Some alterations were made in the upper storey of the female ward in the European Lunatic Asylum at Bhawanipur; and both this institution and the native asylum at Dullunda were provided with a supply of filtered water drawn from the mains recently laid in the southern parts of the town. Materials were collected for the extension of the Berhampore Lunatic Asylum, which is to be effected by taking in barrack No. 5. The roof of the work-shed was re-covered with corrugated iron in place of tiles.

The building of a new Registration office at Bogra, which had been begun in January 1891, was completed at a cost of Rs. 8,993 before the end of 1891-92: some improvements were effected in the Registration office at Arrah, and the extension of the office at Jalpaiguri was completed.

The work remaining to be done to complete the rebuilding of the Custom House at Puri was carried out, and the building was handed over for occupation. The provision of lightning-conductors and sunshades to the Port and Refuge buildings at Hookeytolla was completed.

At Gaya a portion of the Public Works Department godown was converted into an office for the subordinate stationed there, and the conversion of the two-storeyed building at Chittagong known as the old Settlement office into a combined residence and office for the Executive Engineer, which had been begun in 1890-91, was completed during the year. The removal and re-erection of the Public Works Department godown near the new cutcherry at Darjeeling was effected at a cost of Rs. 2,028.

The construction of the new light-house at Norman's Point on the Chittagong Coast, which was well advanced at the close of the previous year, was completed during the year, and the lantern which is provided with a fifth order dioptric occulting light, made by Chance Brothers, was brought into use. The remodelling of

the Kutubdia Light-house, also on the Chittagong Coast, with a view to the erection of a first order revolving light was taken in hand, but its completion was delayed for want of fittings indented for from England. During the progress of this work a temporary lantern has been in use. The light-house at Shortt's Island on the Orissa Coast was slightly damaged by the cyclone which occurred in November last, but was restored to its proper condition.

The laying of the 10" main and the distributary pipes in connection with the Bhágalpur Water-works which had been in progress during the previous year, was completed.

Water-works.

The necessary hydrants were received and fixed during the year, and filtered water is now being drawn throughout the town. At Mymensingh new works for the supply of filtered water to the town were put in hand, funds for the purpose having been provided by Raja Surjya Kant Acharjya Bahadur of Muktagacha, supplemented by a municipal contribution. When completed they will be known as the Rajesvari Water-works. The work of improving and regulating the water-supply at Kurseong, the cost of which is being partly met from private sources, was in hand.

On making over the Barakar Iron-works to the Bengal Iron and Steel Company, it was found necessary to survey and demarcate the estate. This was done under the

Miscellaneous.

orders of Government, and stone pillars were erected along the boundaries as determined. The provision of additional accommodation in the upper storey of the house occupied by the Curator of the Herbarium at the Royal Botanical Gardens, Sibpur, was found necessary, and the works required for the purpose were carried out at a cost of Rs. 4,733. The Observatory buildings at Alipore were connected with the filtered water-supply recently extended to that neighbourhood. A light trolley line with trolleys and a light half-ton crane were provided in the salt-golaks at Sulkea.

Some special repairs were done to the tomb at Shamsheernagar in the Gaya district, and to the tomb of Hassan Sur Shah at Sasaram in the Shahabad district. The latter

Monuments.

tomb was brought on to the books of this department during the year. At Bodh-Gaya quarters for the custodian of the temple were built, and a structure to serve as a museum of fragments of sculpture picked up about the temple was in course of erection. At Murshidabad certain works were undertaken for the protection and preservation of the Khushbag and Roshanbagh mausoleums containing the tombs of Aliverdi Khan and Suraj-ud-daula, former Nawabs of Bengal, the cost incurred being Rs. 1,261.

The construction of an iron girder bridge over the Mahanadi river, a mile north of Silliguri, to carry both the Hill Cart Road and the Darjeeling-Himalayan Railway, had

Communication.

been begun in October 1890. The bridge, which has seven 100-foot spans, is made up of metre-gauge type girders resting on brick piers built over wells sunk to depths varying from 28 to 36 feet. The work was completed in July 1891 at a total cost of Rs. 2,59,399. Further up on the 4th mile the timber bridge over the Panchanai river had become unsafe, and it was decided to replace it by an iron girder bridge suitable for the purposes both of the cart road and the railway. It is to be of two spans of 60 feet each, the girders being metre-gauge type girders which will be carried on brick piers and abutments similar in construction to those built for the Mahanadi bridge. The work was begun in May 1891, but remained unfinished for want of iron-work indented for from England. The replacing of the old timber bridges on the Terai section of the Hill Cart Road by substantial masonry ones was found necessary in the case of minor bridges as well as of the two major bridges above referred to; this work, consisting of rebuilding 16 culverts of spans varying from 5 to 20 feet, was about half finished. Owing to increased traffic on the Tista Valley Road it was found necessary to widen and improve the Sevoke-Kalijhora section of the road; the work, which was begun and completed during the year, cost Rs. 22,422. Some protective works were carried out in connection with the Kalijhora bridge on the Hill Cart Road with the view to diverting the course of the stream, and keeping it in its proper channel; the work, which had been begun in February 1891, was completed during the

year, and cost Rs. 19,989. The suspension bridge, erected by the district authorities over the Little Ranjit at Pool Bazar, was found to be weak and unsafe, and had to be taken down and rebuilt at a cost of Rs. 5,224; the road from Sukna *via* Adulpur to the Central Terai was being put in order.

The reconstruction of old timber bridges had to be taken in hand in several instances; those known as the Rusti and Garridhura bridges on the Mattigurah-Kurseong road were renewed at a cost of Rs. 8,542; the bridges on the road from Mattigurah to the Hill Cart Road were replaced by masonry ones at a cost of Rs. 12,140; the bridge over the Chenga river on the Garridhura-Naxalbari road was reconstructed at a cost of Rs. 4,515; and the timber bridges on the last-named road were all replaced by masonry culverts at a cost of Rs. 26,496. The widening and improvement of the first three miles of the road from Jorbangala to the Tista *via* Peshok, which was begun in December 1891, was completed before the close of the year. The work of constructing a *pukka* road from Mattigurah to Naxalbari, as an improvement on the *kutcha* road which was found unsuitable for the traffic passing over it, was taken in hand in November 1890, and almost completed during the year; the road is nearly 12 miles long. The road from Darjeeling to the Lebong Spur, $4\frac{3}{4}$ miles in length, portion of which had already been completed, was in progress, the 3rd section to the north of Birch Hill being in hand. In Sikkim an iron suspension bridge was being erected over the Ranjit river to replace the cane structure which has been in use for years. The construction of the Tulin bridge, the link remaining to complete the line of communication from Ranchi to Purulia, was noted in last year's report as having been begun; during the year under review progress was much retarded by floods in the Subarnarekha river during March and September 1891. The work was, however, well advanced during the last four months of the year, and was approaching completion by the end of March 1892. The third section of the Ranchi-Chaibassa Road, which is to connect the important centres, Ranchi and Chaibassa, with the Bengal-Nagpur Railway at the Chakardharpur station through which the road passes, was realigned for the most part in order to obtain a better route and a ruling gradient of 1 in 25: the work of construction was begun in December 1891, and good progress had been made. Temporary quarters were erected for the staff and work-people employed the road; work throughout both in surveying and construction has been carried on in the face of very great difficulties owing to the extreme unhealthiness of the district. The fourth section, 15 miles in length, connecting Chaibassa with the Chakardharpur railway station, was in existence before, but had to be taken over by the Public Works Department for conversion into a first-class road. The necessary works include the realigning and metalling of the road, the constructing of a new bridge over the Sanjai river near Chakardharpur with two large spans of 100 feet each crossed by girders, and end spans of 30 feet arched over, the remodelling of the Roro bridge, and repairing and reconstructing the minor bridges on the section. The Sanjai bridge was advanced to girder level, and the rest of the work was more than half finished. A section $1\frac{1}{2}$ miles in length of the Ranchi-Purulia Road, situated within the municipal limits of Ranchi, was taken over by the Public Works Department and reconstructed and remetalled. Special repairs to the bridges and culverts on the Ranchi-Purulia Road, the Kendra section of the Grand Trunk Road, and the Hazáribágh-Purulia Road were put in hand, but for want of funds were not completed during the year. The work of collecting metal for the purpose of increasing the metalled width of the Ranchi-Purulia Road had to be stopped for similar reasons. The survey of the Khunti-Bassia Road in Chota Nagpur was completed during the year. The substitution of rolled iron joists for stone beams in the Durgawati viaduct on the Grand Trunk Road in the Shahabad district was proceeded with, the work being gradually carried out. The surveys of roads in Gurjat and the Khond Mahals, Orissa, were undertaken and carried out at a cost of Rs. 3,774. The roads dealt with were (i) Cuttack to Angul (*via* Dhenkanal), (ii) Angul to Tikerpara, and (iii) Bissipara to Bodligarh. Three suspension bridges were obtained at a cost of Rs. 8,200 from Messrs. Burn & Co. for crossing certain rivers in the South Lushai Hills to improve the means of communication, but were not erected.

The following statement shows the length of road communication maintained by public authorities in Bengal during the year 1891-92 :—

Statement showing the length of road communication maintained by public authorities in Bengal during the year 1891-92.

[This statement does not include roads and streets within municipal limits and maintained from Municipal Fund.]

NAME OF DIVISION.	NAME OF DISTRICT.	Length of metalled roads maintained by the Public Works Department.	Length of unmetalled roads maintained by the Public Works Department.	Length of metalled roads maintained by local authorities.	Length of unmetalled roads maintained by local authorities.	Length of metalled roads.	Total of unmetalled roads.
1	2	3	4	5	6	7	8
		Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
BURDWAN ...	Burdwan ...	4	...	257½	288½	261½	238½
	Bankura ...	...	...	252½	278½	252½	278½
	Birbhum ...	...	...	128½	388½	128½	388½
	Midnapore ...	113	1½	274½	404½	387½	406½
	Hooghly ...	...	...	105½	608½	105½	608½
	Howrah ...	15	...	11½	56½	31½	56½
PRESIDENCY	24 Parganas { Proper ...	...	...	220½	1,304½	229½	1,304½
	Calcutta ...	13½	...	...	...	13½	...
	Nadia ...	...	...	129½	574	129½	574
	Jessore ...	...	...	128½	813½	128½	813½
	Murshidabad ...	...	...	24½	519	24½	519
RAJSHAHÍ ...	Dinajpur ...	...	...	20½	1,092½	20½	1,092½
	Rajshahi ...	...	...	39½	447½	39½	447½
	Rangpur ...	...	35½	11	1,917½	11	1,953½
	Bogra ...	...	...	...	588½	...	368½
	Pabna ...	...	...	7½	653½	7½	653½
	Darjeeling ...	113½	231½	...	351	113½	683½
DACCA ...	Jalpaiguri ...	8½	...	27½	531½	35½	531½
	Dacca ...	1½	...	6½	179½	8½	179½
	Faridpur ...	...	...	8	147½	8	147½
	Backergunge ...	...	...	9½	257½	9½	257½
	Mymensingh ...	...	...	146	356½	146	356½
CHITTAGONG	Chittagong ...	...	...	...	568	...	568
	Noakhali ...	...	...	5½	288½	5½	288½
	Tippura ...	...	...	4	327½	4	327½
	Chittagong Hill Tracts ...	...	...	½	214½	½	214½
PATNA ...	Patna ...	8½	...	111½	472	119½	472
	Gaya ...	...	...	104½	1,159½	194½	1,159½
	Shahabad ...	56	...	145½	1,670½	201½	1,670½
	Muzaffarpur ...	...	...	20½	1,465½	20½	1,465½
	Darbhanga ...	...	...	48	1,026½	48	1,026½
	Saran ...	...	...	102½	980½	102½	980½
	Champaran ...	1½	...	12½	1,347½	13½	1,347½
BHAÚALPUR	Monghyr ...	...	...	13½	1,147½	73½	1,147½
	Bhagalpur ...	...	...	55½	1,549½	55½	1,549½
	Purnea ...	...	...	107½	1,765½	107½	1,765½
	Malda ...	...	...	3½	538½	3½	538½
	Sothpal Parganas ...	...	...	182½	580½	182½	580½
CUTTACK	Cuttack ...	48½	25	28	382½	94½	418½
	Tributary Maháil ...	...	20½	...	...	...	20½
	Puri ...	114	...	66	72½	160	73½
	Balasore ...	95½	...	85	260	180½	260
CHOTA NAGPUR	Hazáribágh ...	205½	6	60½	532½	265½	538½
	Lohardága ...	95½	...	1½	766½	96½	766½
	Singhbhum ...	41	...	27	390½	68	390½
	Manbhum ...	126½	16½	1	514½	129½	531½
Total ...		1,084½	631	2,111½	29,786½	4,196½	30,257½

The following table shows the outlay on original works and repairs on road communication during the year, and the average cost of maintenance per mile :—

	Expenditure by Public- Works Department during 1891-92.	Total number of miles of metalled and un- metalled roads main- tained by Public Works Department.	Average cost of main- tenance per mile.	Expenditure by local officers during 1891-92.	Total number of miles of metalled and un- metalled roads main- tained by local authorities.	Average cost of main- tenance per mile.	Total expenditure during 1891-92.	Total of metalled and unmetalled roads maintained.	Average cost of main- tenance per mile.
Original works	Rs. 8,33,740		Rs. 384	Rs. 18,71,040		Rs. 08	Rs. 19,04,780		Rs. 39
Repairs	6,77,653	1,615½		22,40,630	32,543		23,08,233	34,408½	
Total	11,81,393			34,81,701			42,13,004		

Additional protective works were carried out on the bank of the river Barh

Miscellaneous public improve-
ments.

Gandak at Muzaffarpur to prevent the river cutting away the ground on which the circuit-house stands.

The work of converting the Godagori road, which leads to the cutcherry at Rampur Boalia, into an embankment for the protection of the country north of the town was begun in May 1891 and very nearly finished. The length is 12,250 feet, and the cost of the work amounts to Rs. 24,934. The survey of the Kosi river was carried out with a view to observing the changes taking place and devising some measures for preventing the serious damage which might occur during heavy floods. The observations were not, however, completed. Some steps had to be taken to arrest the erosive action of the river along the Strand Road at Serampur, which had been going on for some years. Similar precautions had to be taken for the protection of the right bank of the river Bhyrab and of the civil station of Khulna, where damages were sustained by the floods during 1890-91. The pitching of the river-slope at Murshidabad for the protection of the bank and the buildings standing by was partly carried out, and the manufacture of brick material for work during 1892-93 was in active progress.

There is nothing serious to record under this head for the year under review, except in regard to the cyclone that passed over Hookeytolla in Orissa on the 5th November 1891, causing much damage to the temporary buildings and the revetment at that place, also to the warehouse at Jumbo, and the light-house and tramway on Shortt's Island. During the floods of September 1891, the cofferdam which had been sunk for one of the piers of the Tulin Bridge in the Subarnarekha river was washed away. A storm which passed over Burdwan on the 13th May 1891 blew down portion of the enclosure wall of the jail there; at Port Canning also the roof of the police building was blown off during a storm that raged there on the 10th June 1891. In the Darjeeling district the rainfall was comparatively light; no serious slips occurred, and there was little or no interruption to traffic. The few slips recorded were those that occurred on the Tista Valley, Ranjit and Peshok roads. On the road from the Tista Bridge to Kishi a portion of the road had to be diverted, as the old route was breached by a *ghora*; and on the road from Rikussum junction to Jungignard the bridge over the Chol river was damaged, but communication was not interrupted. Slight shocks of earthquake were felt in the northern part of the Dacca Division. The old court-house No. 15 at Dumka was struck by lightning on the 18th May 1891, but no serious damage resulted. The subdivisional buildings at Bagerhat were also struck, the damage being slight. The only case of fire recorded occurred at the circuit-house at Darbhanga, where a portion of the out-houses was burnt.

The procedure to be followed in obtaining administrative sanction to new projects was a matter that called for attention.

Administrative changes. The Lieutenant-Governor noticed that in many instances considerable time and labour were wasted in Executive Engineers' offices in preparing detailed plans and estimates for alterations and extensions for new buildings proposed by civil officers before the question whether such works were really necessary had been considered and decided upon by Government.

Orders were issued directing that in future all projects for new works or for additions and alterations to existing buildings, &c., involving a larger expenditure than the heads of departments are authorized to sanction themselves, must first be submitted for administrative sanction of the Lieutenant-Governor through the department of the Secretariat which ordinarily deals with the requirements of the department concerned. In doing this the officer who makes the application is required to state what the existing accommodation is, why and in what respects it is deficient, and what the cost of his proposals will approximately be. After administrative sanction is given the Public Works Department prepares and gives sanction to detailed plans and estimates for the works approved, and provides funds for carrying them out. Instructions were also given that Executive Engineers should in the first instance merely prepare rough estimates and sketches of ground plan when required to do so by civil officers, to enable them to ask for the administrative sanction of Government.

The Lieutenant-Governor's attention was also drawn to the unnecessary duplication of work caused by the system under which Executive Engineers had charge of the Imperial and Provincial buildings, while the District Engineers were in charge of the roads and all other buildings. Thus it might frequently happen that an Executive Engineer and a District Engineer might go out on the same excursion to visit—one, the road, the dispensary, and dāk bungalow; the other, the subdivisional cutcherry; and similarly Superintending Engineers travelled over the same ground as Inspectors of Local Works while inspecting their respective subordinates. To avoid this unnecessary labour it was decided, with the consent of the Government of India, to place all Imperial buildings (Post and Telegraph offices) and Provincial buildings (cutcherries, jails, and the like) in a district (with the exception of canals and ombankments) under the District Board and their Engineer, and all such engineers under one inspecting and supervising officer. The Burdwan, Dacca, and Chittagong Public Works Divisions have accordingly been abolished, and the works in the districts formerly comprised in these three divisions have been placed under the respective District Boards. Three of the five Inspectors of Local Works have also been abolished, viz., Bhágalpur, Presidency and Rajshahi, and Burdwan and Orissa. The District Engineers of Cuttack and Puri have been placed under the Superintending Engineer of the Orissa Circle, and the District Engineers of Balasore and Midnapore under the Superintending Engineer, South-Western Circle. A new Presidency Circle has been formed, comprising the 1st and 2nd Calcutta and the Calcutta Workshops Divisions, and has been placed directly under the Chief Engineer, Roads and Buildings branch. The District Engineer of the 24-Parganas will be under the Superintending Engineer, Western Circle. The Provincial and local works in the remaining districts of the Province, except in the Patna Division, have been divided into three Circles under two Superintending Engineers and one Inspector of Local Works. The head-quarters of the Superintending Engineers will, under the new arrangements, be at Chinsura and Bhágalpur instead of at Calcutta. In the Patna Division the Superintending Engineer, Sone Circle, will have charge of all irrigation works and embankments and the Imperial and Provincial buildings in the seven districts, while the Inspector of Local Works, Patna, will supervise all the local works. As the responsibilities of the District Engineers have been considerably increased under the new arrangements, revised rules regarding the qualifications of District Engineers were passed in February last.

The effect of this redistribution and retrenchment has been to reduce the cadre of the Public Works Department in the Roads and Buildings branch as follows:—

	Former cadre.	Now approved.
Chief and Superintending Engineers	... 3	3
Inspectors of Local Works	... 7	2
Under-Secretary	... 1	1
Executive Engineers	... 8	5
Assistant Engineers	... 8	4
Allowance for furlough	... 4	2
Total	... 31	17

It is further contemplated on the completion of the important roads now under construction to abolish the Chota Nagpur Division, with its staff of one Executive and one Assistant Engineer, so reducing the cadre to 15. The effect of this decrease in officers, together with the abolition of the several offices, has been to reduce the cost of establishment in the Province by Rs. 83,148.

The mode in which the transfer of Provincial buildings to District Boards has been carried out is as follows:—The cost of repairs during the last four years has been calculated, and the average amount has been transferred to the District Board, with the obligation of maintaining the buildings in good repair. The staff of Sub-Engineers, Supervisors, Overseers and Sub-Overseers hitherto employed has been lent, but not transferred, to the District Board, so that no question of foreign service or contributions for pension may arise. Their pay and promotion rest with the Public Works Department, and as they retire or die, the Board will be at liberty to fill their places by men of their own, receiving a corresponding increase to their grant. Where the Provincial and Imperial buildings thus transferred are numerous and expensive, a grant has been made to cover an addition to the District Engineer's salary as remuneration for his increased duties, and one or more clerks from the abolished offices have also been transferred to carry on the clerical and accounts work.

The proportion of time spent by Superintending Engineers in the important duties of inspection during the year was on the whole satisfactory. The number of days each officer was out on tour is as follows:—

Superintending Engineer,	Sone	Circle	...	172 days
Ditto,	Western	do.	...	91 do.
Ditto,	Northern	do.	...	260 do.
Ditto,	South-Western	do.	...	115 do.
Ditto,	Orissa	do.	...	142 do.

In the case of the Western Circle, which has the smallest record, it is noted that for the most part of the year when the Calcutta Divisions were included in the circle, the Superintending Engineer was greatly tied down to his head-quarters.

In regard to the work of inspection performed by the Accounts Department under Colonel Carey, it is satisfactory to observe that the office of every Executive Engineer, Collector of Canal Revenue, Land Acquisition Officer, and Toll-collector was inspected during the year.

Most of the Executive and Assistant Engineers have spent a reasonable proportion of their time on tours of inspection, few having been out for less than 150 days in the year.

Irrigation.

The actual transactions of the Irrigation Branch for the year 1891-92 are shown below in comparison with the budget and revised estimates of that year:—

	Actuals, 1890-91.	Budget estimate, 1891-92.	Revised estimate, 1891-92.	Actuals, 1891-92.
RECEIPTS.	Rs.	Rs.	Rs.	Rs.
XXIX—Major Works—Direct receipts— Provincial	13,32,141	14,19,000	14,42,000	15,38,608
XXX—Minor Works and Navigation—				
Irrigation and Navigation Works— Provincial	8,31,775	8,12,600	8,20,000	8,06,055
Agricultural Works— Provincial	12,015	7,400	9,000	11,406
Total	21,82,931	22,39,000	22,77,000	24,16,069
CHARGES.				
42—Major Works—Working expenses— Provincial	13,43,688	14,19,000	14,23,000	13,50,089
43—Minor Works and Navigation—				
Irrigation and Navigation Works— Provincial	7,48,872	8,39,600	8,47,300	8,01,061
Agricultural Works— Provincial	7,52,844	8,53,600	8,36,631	7,58,362
Contributions	3,890	...	16,144	6,927
49—Irrigation Works— Capital expenditure not charged against revenue	4,28,634	5,73,000*	6,07,000*	5,75,627*
Total	32,78,928	36,85,200	37,30,144	34,91,848

* Exclusive of expenditure in England.

In addition to the expenditure shown in the above statement, a sum of Rs. 74,953 was expended on embankments and drainage works during the year, and was charged to the suspense head "Takavi." The expenditure under this head in the previous year was Rs. 1,03,490. The outlay on the Rajapore and Howrah drainage projects chargeable in the civil accounts under the head "Local loans" was Rs. 20,788, against Rs. 52,529 in the previous year.

I.—MAJOR IRRIGATION WORKS.

Capital outlay.

The total capital outlay (direct charges) not charged against revenue to end of the year 1891-92 amounted to Rs. 6,08,30,176, against sanctioned estimates aggregating Rs. 7,01,99,857, leaving an unspent balance of Rs. 93,69,681 at the close of the year. It must be remarked, however, that the currency of

the estimates of the Orissa and Sone projects has expired, and that the present outlay is held to be irregular, pending orders of the Government of India.

MAJOR IRRIGATION WORKS.	Amount of sanctioned estimate.	Expenditure during 1891-92.	Expenditure to end of 1891-92.	Balance for expenditure from 1st April 1892.
	Rs.	Rs.	Rs.	Rs.
Orissa canals	3,13,96,220	3,88,740	2,46,06,666	87,89,554
Midnapore canal	83,73,091	14,489	82,58,711	1,14,380
Hijili Tidal canal	25,41,849	2,34,918	22,32,706	3,09,144
Sone canals	2,78,88,897	2,04,068	2,67,33,094	21,56,803
Total	7,01,99,857	6,42,225	6,08,90,176	93,09,681

The capital outlay on the Midnapore canal and on the remodelling of the Hijili Tidal canal, though met from Provincial funds, is, under the orders of the Government of India, shown under major works.

The indirect charges (Capital expenditure not charged against revenue) to end of the year 1891-92 are compared with the sanctioned estimates in the table following:—

MAJOR IRRIGATION WORKS.	Amount of sanctioned estimate.	Charges during 1891-92.	Charges to end of 1891-92.	Balance avail- able on 1st April 1892.
	Rs.	Rs.	Rs.	Rs.
Orissa canals ...	9,19,626	8,042	5,64,230	3,55,395
Midnapore canal ...	1,84,215	...	1,84,133	82
Hijili Tidal canal ...	67,620	6,968	56,608	11,112
Sone canals ...	13,59,607	5,191	9,10,561	4,39,066
Total ...	25,71,067	20,141	17,06,422	8,65,645

The amount of simple interest during the year 1891-92 on the debt incurred on the above-named works was Rs. 24,16,363, against Rs. 23,87,119 of the previous year. The charges on this account to the end of the year under review amounted to Rs. 4,12,32,439.

Revenue receipts and expenditure.

The direct revenue receipts and working expenses (direct charges) of the Major Irrigation Works for the year 1891-92, compared with those of the previous year, are shown in the following statement:—

MAJOR IRRIGATION WORKS.	1891-92.			1890-91.		
	Receipts.	Working expenses.	Net result.	Receipts.	Working expenses.	Net result.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Orissa canals ...	3,70,922	3,96,016	(—) 25,094	3,44,934	4,39,883	(—) 94,447
Midnapore canal ...	2,34,697	2,57,324	27,373	2,36,191	1,99,049	37,942
Hijili Tidal canal ...	36,915	48,960	(—) 11,754	28,044	51,968	(—) 23,924
Sone canals ...	9,06,074	6,48,060	2,58,014	7,29,170	6,53,286	75,884
Total ...	15,08,608	13,50,360	2,48,539	13,39,141	13,43,680	(—) 4,545

It will thus be seen that, compared with the previous year, there is an increase in the receipts of Rs. 2,59,467, while the increase in the working expenses is Rs. 6,383 only, the net result being a profit of Rs. 2,48,539, against a deficit of Rs. 4,545 in the preceding year. This favourable result, arising from the causes explained below, is mainly due to the Sone canals, working expenses having exceeded receipts on the Orissa and Hijili Tidal canals.

II.—MINOR WORKS AND NAVIGATION.

IRRIGATION AND NAVIGATION WORKS.

WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.

(1)—Capital outlay.

The capital outlay (direct charges) to end of the year 1891-92 is shown in the following statement:—

WORKS.	Amount of sanctioned estimates.	Expenditure during the year 1891-92.	Expenditure to end of the year 1891-92.	Balance for expenditure from 1st April 1892.
<i>Canals in abeyance or abandoned.</i>	Rs.	Rs.	Rs.	Rs.
Tirhut project	3,51,079	...	5,31,425	(—) 1,80,346
Damodar project	1,43,974	(—) 1,200	1,47,541	(—) 3,567
<i>Canals under construction.</i>				
Calcutta and Eastern canals ... ..	...	(—) 10,329	52,22,543	...
Orissa Coast canal	43,48,873	3,940	42,38,909	1,07,874
<i>Canals completed.</i>				
Saran project	6,69,521	...	6,69,570	(—) 5,949
Total ... ..	...	(—) 7,589	1,08,10,078	...

The Orissa Coast canal is practically completed, and the expenditure, which was Rs. 63,774 in 1889-90 and Rs. 17,212 in 1890-91, has now fallen to Rs. 3,940, the total expenditure shown in the above table being (—) Rs. 7,589, against Rs. 21,625 in 1890-91 and Rs. 1,12,159 in 1889-90.

Details of the receipts and charges under Minor Works and Navigation are given in the following table:—

MINOR WORKS AND NAVIGATION.	1891-92.			1890-91.		
	Receipts.	Working expenses.	Net result.	Receipts.	Working expenses.	Net result.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Calcutta and Eastern canals	5,25,219	3,38,403	1,86,816	5,25,085	3,09,623	2,15,462
Orissa Coast canal	62,057	75,298	(—) 13,239	65,586	73,766	(—) 8,180
Saran	15,831	12,638	3,293	36,983	37,403	(—) 420
Nadia rivers	1,92,737	1,06,857	85,880	2,00,482	1,03,537	96,945
Eden canal	10,119	25,663	(—) 15,544	8,597	34,795	(—) 26,198
Madhubani canal	92	10,506	(—) 10,414	42	11,837	(—) 11,795
Total Revenue account ...	8,06,055	5,59,363	2,46,792	8,31,775	5,70,951	2,60,824
		Capital expenditure.				
Damodar project ... ..	...	(—) 1,200				
Midnapore canal ... ..	...	14,419				
Calcutta and Eastern canals ... ..	...	(—) 10,329				
Orissa Coast canal ... ..	...	3,940				
Hijli Tidal canal ... ..	...	2,34,918				
Total	8,06,055	8,01,081	4,994			

(2)—Revenue Account.

The actual receipts and direct charges during the year 1891-92 compared with those of the previous year are shown below:—

	Receipts.	1891-92. Rs.	1890-91. Rs.
Calcutta and Eastern canals	5,25,219	5,25,085
Orissa Coast canal	62,057	65,586
Saran canals	15,831	36,983
Total		6,03,107	6,27,654

		1891-92.	1890-91.
<i>Charges.</i>		Rs.	Rs.
Calcutta and Eastern canals	...	3,28,403	3,09,623
Orissa Coast canal	...	75,296	73,766
Saran canals	...	12,538	37,403
Total		4,16,237	4,20,792

The net revenue from minor works was Rs. 1,86,870, against Rs. 2,06,862 in the previous year.

The profit is derived almost entirely from the Calcutta and Eastern canals, the net revenue from which has, however, fallen from Rs. 2,28,575 in 1889-90 to Rs. 2,15,462 in 1890-91, and again to Rs. 1,96,816 in the year under review. There is a deficit of Rs. 13,239 from the Orissa Coast canal, while the Saran canals, on which there has in previous years been a deficit, now show a small profit of Rs. 3,293.

WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.

		1891-92.	1890-91.
<i>Receipts.</i>		Rs.	Rs.
Nadia rivers	...	1,92,737	2,00,482
<i>Charges.</i>			
Nadia rivers	...	1,06,857	1,03,637

WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.

		1891-92.	1890-91.
<i>Receipts.</i>		Rs.	Rs.
Eden canal	...	10,119	3,597
Madhubani canal	...	92	42
Total	...	10,211	3,639
<i>Charges.</i>			
Eden canal	...	25,003	34,795
Madhubani canal	...	10,506	11,827
Total	...	35,509	46,622

The net revenue for the year 1891-92 under these two heads was Rs. 59,922, against Rs. 53,962 for the year 1890-91.

AGRICULTURAL WORKS.

Particulars in connection with this class of works are given below:—

		1891-92.	1890-91.
<i>Receipts.</i>		Rs.	Rs.
Government embankments	...	7,684	8,140
Takávi embankments under contract	...	3,722	3,875
Total	...	11,406	12,015
<i>Charges.</i>			
Government embankments	...	6,23,265	6,26,196
Takávi embankments under contract	...	1,29,997	1,26,648
Other works from contributions	...	6,927	3,890
Total	...	7,65,189	7,56,734

Of the total expenditure on Government embankments during the year, a sum of Rs. 4,84,558 was spent on works and maintenance and repairs, against Rs. 4,32,630 expended during the year 1890-91. The balance was spent on

establishment and other sub-heads of account. The share of establishment charges borne by Government embankments was Rs. 1,27,352, against Rs. 1,34,023 charged in the previous year; for takávi works the cost of establishment was Rs. 42,225, against Rs. 37,548, and the expenditure on works and maintenance and repairs was Rs. 92,707, against Rs. 90,434 of the previous year. The sum of Rs. 6,927 received from contributions was expended on village channels for the Sone canals, and on sluices in the Murshidabad, 24-Parganas, and Saran districts.

The state of account of takávi works proper, by which is meant works not provided for in the irrigation budget, is shown in the table below.

The works are mainly either works undertaken under the Drainage Act, or embankments not maintained under the contract system, but the actual expenditure on which is recovered from the persons benefitted:—

Division.	Opening debit balance.	Expenditure during the year 1891-92.	Total.	Recoveries during the year 1891-92.	Not debit balance at the end of the year 1891-92.
	Rs.	Rs.	Rs.	Rs.	Rs.
Northern Drainage and Embankment	1,46,935	16,801	1,63,736	31,012	1,32,724
Cosaye	32,791	44,584	77,375	5,476	71,899
Gandak	13,491	10,186	23,677	13,732	9,945
Balasore	317	377	694	450	244
Burdwan	1,332	2,347	3,679	1,933	2,746
Eastern Sone	1,234	684	1,918	1,263	655
Darjeeling ... ..	...	45	45	45	...
Total	1,98,103	74,953	2,73,056	53,301	2,19,755

The expenditure during the year on takávi works amounted to Rs. 74,953, whilst the recoveries and adjustments aggregated Rs. 53,301 only: the closing balance at the end of the year has accordingly increased to Rs. 2,17,755. The increase in the balance, which is current, is solely due to the large expenditure on works in progress during the year, which will be adjusted by debit to Civil department on the completion of the works.

The transactions of each of the three circles will now be described separately as in previous years.

ORISSA CIRCLE.

The following statement compares the expenditure in this circle under the different heads of account for the year 1891-92 with that of the year 1890-91:—

	1891-92.	1890-91.
MAJOR IRRIGATION WORKS.	Rs.	Rs.
<i>Capital expenditure not charged against revenue (direct charges).</i>		
Orissa canals (Imperial)	3,38,740	3,31,596
<i>Working expenses (direct charges).</i>		
Orissa canals (Provincial)	3,96,016	4,39,383
MINOR WORKS AND NAVIGATION.		
<i>Agricultural Works—Provincial.</i>		
Orissa embankments	1,18,343	1,64,230
Total	9,03,098	9,35,209

The details of each of the above works are given below :—

MAJOR IRRIGATION WORKS.

Capital expenditure not charged against Revenue.

ORISSA CANALS.

The expenditure (direct charges) by main heads of account charged to the Capital account of these canals during the year 1891-92 compared with the year 1890-91 is shown below :—

	1891-92.	1890-91.
	Ra.	Ra.
I.—Works—		
(1) Head works ...	1,222	1,060
(2) Main canal and branches ...	55,235	1,29,836
(3) Distributaries ...	1,63,241	86,964
(4) Drainage and protective works ...	1,04,743	61,299
Total Works ...	3,24,441	2,79,149
II.—Establishment ...	57,375	47,656
III.—Tools and plant ...	2,855	7,089
IV.—Suspense accounts ...	4,138	(—) 2,189
Grand total ...	3,88,809	3,31,756
Less receipts on Capital account ...	69	159
Net total ...	3,88,740	3,31,696

The budget grant for works under Capital, which originally stood at Ra. 3,66,000, was subsequently reduced to Ra. 3,36,450.

The following table shows the state of the expenditure on "Works" and other sub-heads of account as compared with the sanctioned revised estimate of the Orissa project :—

NAME OF WORK.	Amount of estimate sanctioned by the Secretary of State.	EXPENDITURE—		Balance.
		During 1891-92.	To end of 1891-92.	
	Ra.	Ra.	Ra.	Ra.
Total "Works," Mahanadi series ...	1,75,75,076	2,05,615	1,39,75,672	98,97,409
Total "Works," Brahmini-Byturni series ...	54,71,734	1,18,826	87,99,969	16,71,775
I.—Grand Total "Works" ...	2,30,46,809	3,24,441	1,77,75,651	53,69,178
II.—Establishment ...	57,86,854	57,375	44,64,848	13,21,911
III.—Tools and plant ...	23,79,628	2,855	20,90,781	8,89,197
IV.—Suspense accounts ...	...	4,138	1,63,791	(—) 1,63,791
Loss by exchange ...	2,94,089	...	2,68,070	25,939
Total ...	3,15,04,790	3,88,809	2,46,92,766	68,13,014
V.—Less receipts on Capital account ...	1,08,880	69	86,100	22,400
Net total ...	3,13,96,220	3,88,740	2,46,09,666	67,90,614

During the year under review the following works, chargeable to the Capital account of the project, were carried out :—

Mahanadi series.

Work on the Taldundah extension canal was sufficiently advanced to admit of its being opened to traffic on the 16th July 1891. During the year the outfall lock at Paradeep was completed, and the banks of the canal mostly brought up to proper section. Amongst minor works on the main canal may be mentioned alterations to the Jubra and Birbati lock bridges, in which arches were replaced

by girders at a high level to admit of the passage of steamers. The earthwork of distributaries 11, 12, and 13 taking off from the Taldandah canal was nearly finished and arrangements made for starting the masonry works. In all $24\frac{3}{4}$ miles of this main canal and $4\frac{3}{4}$ miles of distributaries were opened during the year under review.

The most important work on the Machgong canal was at Barera, where a new masonry weir was constructed, and certain alterations to the bed and banks of the canal itself were in progress. These alterations, rendered necessary by the changes which the construction of the weir caused in the régime of the canal, involve the lowering of the bed of the canal below Barera to give sufficient depth of water for navigation and the raising of the banks between Barera and Nawada consequent on the raising of the water level. A new inspection bungalow situated at Gorudmal was completed. The construction of the new distributaries on this canal has been well pushed on, the returns showing an addition of $27\frac{1}{2}$ miles during the year to the length open for irrigation. The state of the work in those portions which are not yet opened is also satisfactory, the masonry works being mostly either completed or nearly so, and the earthwork well advanced. As regards subsidiary works, the drainage cuts at Barera and Tumpua and the Daib embankment were practically completed, while, on the other hand, no progress was made with the refuge mounds at Sankarisahai island, owing to delay in the acquisition of land.

There is nothing to record regarding the Kendrapara main canal proper, but fair progress was made with the three distributaries under construction, of which one was completed, with the exception of the work on some additional drainage syphons, and about one-fourth of the excavation on the other two remained to be done. The length actually opened during the year was $6\frac{1}{2}$ miles, and probably more would have been added had not the work been retarded by an outbreak of cholera. There is a drainage scheme in connection with No. 15 distributary, on which the progress made was small.

The only work in progress on the Gobri main canal and its extension was an iron drawbridge at Alba lock, which was being fixed in position. The work on the new distributaries of the Gobri canal showed good progress as regards earthwork, but on the extension canal no labour of this class could be obtained, even at enhanced rates, owing to the hardness of the soil and the prevalence of cholera. Arrangements were being made for starting the masonry works. In spite of the difficulties alluded to above, $15\frac{1}{4}$ miles of distributaries were opened during the year.

The flood embankment of the Pattamoondi canal was almost completed, and three regulators in the canal were finished, while the construction of the new distributaries was advanced at a more rapid rate than on any of the other canals, no less than $65\frac{1}{4}$ miles having been opened during the year, and but little remaining to complete the work. Some rest-houses which are in course of construction on the distributaries were also well advanced, and the scheme for the improvement of the river Gobri was completed.

There are no new distributaries under construction from Range I of the high level canal, but some work was done on the minor drainage cuts, which are now practically complete, and a syphon at Champapur, which carries distributary No. 5 across the drainage channel from the Kodai escape, and which had collapsed, was rebuilt during the year.

Brahminj-Byturni Series.

The works in connection with the Sukendapat drainage scheme, on Range II of the high level canal, were in progress, but are not yet completed. On Range III of this canal four syphons for carrying drainage water across distributaries Nos. 2, 3, and 4 are practically finished, while considerable progress has been made with drainage and protective works, the minor drainage cuts being completed, and nearly half the earthwork in the drainage cut from the Orissa Trunk Road to Jonadi done.

Two new distributaries, comprising numerous branches, were in progress on the Jajpur canal, but the work on the whole is not in a very forward condition, the masonry works on the two main lines and on one branch only being fairly well advanced, and the progress on earthwork being only

moderate. An aggregate length of $6\frac{1}{2}$ miles has, however, been opened during the year. Better progress has been made with the works classified as drainage and protective works, comprising the Burra Kharsua left embankment, the Byturni right embankment, the Bhimai Had drainage cut, and the repairing of a breach in the Gohali embankment, all of which were either completed or well advanced at the close of the year. Two inspection bungalows at Dasrathpur and Kamalpur were also in progress, but little had been done beyond manufacturing the bricks required for their construction.

WORKING EXPENSES.—The expenditure on maintenance and repairs for the year 1891-92, compared with that for the previous year, is shown below:—

Sub-head.		1891-92.	1890-91.
		Rs.	Rs.
IB.—Maintenance and repairs	...	1,75,638	2,22,638
II.—Establishment	...	1,93,355	2,01,569
III.—Tools and plant	...	27,023	13,951
IV.—Profit and loss	...	...	1,225
Total		3,96,016	4,39,383

The revised estimate for the year under the head of revenue repairs having been Rs. 3,91,313, the total excess outlay under working expenses was Rs. 4,703 only.

The following statement shows the total lengths of canals and distributaries in operation at the close of the year 1891-92, and the areas which are protected from flood, commanded, and provided with distributaries, as compared with those of the previous year:—

NAME OF CANAL.	1891-92.						1890-91.					
	LENGTH OF CANAL OPEN—		Length of distributaries and village channels.	Area protected from flood.	Area under command.	Area provided with distributaries.	LENGTH OF CANAL OPEN—		Length of distributaries and village channels.	Area protected from flood.	Area under command.	Area provided with distributaries.
	For irrigation and navigation.	For irrigation only.					For irrigation and navigation.	For irrigation only.				
	Miles.	Miles.	Miles.	Acres.	Acres.	Acres.	Miles.	Miles.	Miles.	Acres.	Acres.	Acres.
Kendrapara ...	30	...	363½	129,431	101,110	26,120	39	...	357	129,431	101,110	22,981
Ditto Extension ...	15	...	...	8,960	7,000	...	15	...	...	8,960	7,000	...
Sobri (including extension).	21	...	75½	27,261	53,290	6,118	21	...	...	27,261	53,290	...
Pattamoondi ...	...	47	98½	66,600	51,250	37,829	...	47	33½	66,600	51,250	10,172
Taldundah ...	51½	...	76½	19,520	75,378	21,850	27	...	71½	19,520	15,260	15,256
Machgong ...	4	28	149½	97,057	97,057	54,480	4	28	122½	97,057	97,057	41,800
High Level, Range I ...	33	...	131½	80,128	48,815	48,815	33	...	131½	80,128	48,815	48,815
Ditto " II ...	12½	...	...	...	10,000	...	12½	...	...	...	10,000	...
Ditto " III ...	19	...	49½	...	57,500	44,047	19	...	49½	...	57,500	44,047
Jajpur ...	6½	...	6½	...	70,000	600	6½	...	...	...	70,000	...
Total ...	201½	75	890½	427,937	571,200	308,839	177	75	764½	427,937	511,272	262,866

Twenty-four and three-quarters miles in the length of the canals and one hundred and twenty-five miles in that of the distributaries have been added during the year; consequently the total area under command and that provided with distributaries have increased by 60,028 and 55,993 acres respectively.

Rainfall.—The rainfall at Cuttack during the year 1891-92 was 75·30 inches, or 4·55 inches more than that of the previous year. It was greater than the average fall at Cuttack for 30 years by 18·18 inches.

The following statement shows in detail the areas leased in the year 1891-92 as compared with those of the previous year:—

NAME OF CANAL.	1891-92.				1890-91.			
	Kharif.	Rabi.	Sugar- cane.	Total.	Kharif.	Rabi.	Sugar- cane.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Kendrapara	51,990	3,330	50	55,370	52,548	3,328	35	55,900
Gabri	3,312	74	...	3,386	2,552	208	1	2,761
Do. Extension	3,418	20	...	3,438	2,804	4	...	2,808
Pattamoondi	12,785	44	...	12,829	12,441	60	...	12,501
Toldumdah	10,590	273	21	10,884	10,415	431	12	10,858
Maehigong	33,838	63	4	33,905	30,457	131	14	30,602
High Level, Range I	22,074	17	11	22,102	25,635	91	10	25,736
Ditto " II	2,529	52	...	2,581	2,503	29	...	2,532
Ditto " III	40,755	1	207	40,963	40,473	...	208	40,681
Jajpur	667	...	...	667	...	...	...	...
Total	181,938	3,884	293	185,605	179,856	4,282	280	184,418

Thus the total increase was 1,247 acres, the area under annual kharif lease having been 2,444 acres, while there was no land under such lease in the previous year.

The particulars of water-rates during the year 1891-92 compared with those of the previous four years are given below:—

YEAR.	Amount out- standing at commence- ment of year.	Amount falling due during the year.	Total for recovery.	Cash realizations.	Remitted or written off.	Balance at the end of the year.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1887-88	87,468	1,50,297	2,37,765	1,37,889	7,777	92,109
1888-89	92,109	1,90,765	2,82,874	1,51,305	22,912	1,14,597
1889-90	1,14,597	2,37,377	4,01,874	1,99,844	25,268	1,76,762
1890-91	1,76,762	2,69,650	4,46,412	2,09,806	38,242	1,98,364
1891-92	1,98,364	2,52,880	4,51,244	2,17,256	30,263	2,33,706

The amounts falling due this year are greater than those of 1890-91 by Rs. 13,230. This increase is due to leases re-executed during the drought in October 1891 and to the punctual issue of demand statements.

The following statement shows the particulars of traffic upon the canals for the last five years :—

YEAR.			Tonnage.	Value of cargo.	Tollage (assessed or earnings).
			Tons.	Rs.	Rs.
1887-88	...	...	176,902	50,32,093	67,385
1888-89	...	...	189,695	47,40,937	67,767
1889-90	...	...	301,740	48,68,266	77,660
1890-91	...	...	311,249	85,21,551	1,11,709
1891-92	...	...	332,520	96,03,417	1,18,427

The canals were closed as usual for silt clearance at the beginning of May, and re-opened for traffic on dates varying from the 6th to the 29th of June.

The revenue and working expenses of the Orissa canals for the past five years are shown below :—

	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
<i>Receipts.</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Water-rates ...	1,37,880	1,51,365	1,99,844	2,09,806	2,17,256
Navigation ...	71,004	77,908	89,236	1,21,198	1,35,902
Miscellaneous ...	14,171	14,242	15,143	13,708	17,813
Total ...	2,23,044	2,43,515	3,04,223	3,45,012	3,71,001
Less refunds of revenue	565	221	99	76	79
Total receipts ...	2,22,679	2,43,294	3,04,124	3,44,936	3,70,922
<i>Working expenses.</i>					
Direct charges ...	4,80,949	3,86,948	4,31,597	4,39,383	3,96,016
Indirect charges ..	21,601	18,073	26,313	28,220	27,070
Total working expenses	5,02,450	4,05,019	4,56,910	4,67,603	4,23,086
Balance net revenue ...	(—) 2,79,771	(—) 1,61,725	(—) 1,52,786	(—) 1,22,667	(—) 52,164

AGRICULTURAL WORKS.

The expenditure on the Orissa embankments for the last two years is given below :—

	1891-92.	1890-91.
	Rs.	Rs.
Works ...	13,803	1,818
Maintenance and repairs ...	77,675	1,18,933
Establishment ...	22,487	39,160
Tools and plant ...	4,455	3,458
Suspense accounts ..	(—) 78	881
Total	1,18,342	1,64,250

The original works undertaken and completed during the year were the following:—in the Brahmini-Byturni Division the spurs and groynes in the Brahmini river at Pattamoondi and the revetment below Alba lock, and in the Puri Division the rest-shed at Pongah. The works under repairs consisted generally of the usual annual repairs to the embankments, bungalows, sluices, repairs to spurs, &c. The length of embankments maintained in the Orissa Circle is 748.26 miles.

As regards floods, it may be remarked that in every river the highest level reached was higher than that of the previous year.

SOUTH-WESTERN CIRCLE.

The expenditure in this circle during the year 1891-92, compared with that of the year 1890-91, is shown in the following statement :—

MAJOR IRRIGATION WORKS.				1891-92.	1890-91.
<i>Capital expenditure not charged against revenue (direct charges).</i>				Rs.	Rs.
Midnapore canal	...	...	...	14,469	(—) 186,890
Remodelling Hiji Tidal canal	...	...	...	2,24,918	1,62,384
<i>Working expenses (direct charges).</i>					
Midnapore canal (Provincial)	...	...	...	2,57,324	1,99,849
Hiji Tidal canal (Provincial)	...	...	...	48,089	61,988
MINOR WORKS AND NAVIGATION.					
<i>Provincial.</i>					
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.					
<i>Capital account.</i>					
Damodar project	...	...	...	(—) 1,200	(—) 1,200
Calcutta and Eastern canals	...	...	...	(—) 10,829	5,813
Orissa Coast canal	...	...	...	3,940	17,212
<i>Revenue account.</i>					
Calcutta and Eastern canals	...	...	...	3,29,403	3,09,823
Orissa Coast canal	...	...	...	76,296	73,766
WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.					
Nadia rivers	...	...	...	1,03,857	1,03,537
WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.					
Eden canal	...	...	...	25,063	34,796
<i>Agricultural Works.</i>					
Government embankments in the Burdwan estate	...	...	...	1,38,171	1,08,989
Other Government embankments in the circle	...	...	...	2,31,596	2,10,576
Takávi embankments under contract	...	...	...	26,291	24,165
Howrah drainage works (local loans)	...	...	...	713	3,303
Rajapore drainage project (ditto)	...	...	...	20,075	48,227
Dancuni ditto (ditto)	...	...	...	1,300	1,800
Sluices, village channels, &c. (contribution)	...	...	...	2,314	1,088
Embankments and drainage works (takávi)	...	...	...	64,109	96,865
Ballaghye drainage channel	...	...	...	73,366	88,703
Total	...	...	...	16,30,634	14,96,008

The expenditure on the Dancuni drainage project was not shown in the report for 1890-91.

MIDNAPORE CANAL.

The following statement shows* under the different heads of account the capital outlay (direct charges) on the Midnapore canal for and to end of 1891-92, compared with the sanctioned estimates as sanctioned by the Secretary of State (since withdrawn) and by the Governments of India and Bengal :—

PARTICULARS.	Amount of estimates sanctioned by the Secretary of State (since withdrawn).	Expenditure against construction estimates sanctioned by Secretary of State.	Fresh sanctions by Governments of India and Bengal.	EXPENDITURE ON FRESH SANCTIONS.		Unspent balance of current estimates.
				1891-92.	To end of 1891-92.	
<i>Direct charges.</i>	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
I.—Works	54,09,601	53,42,663	15,887	...	10,844	6,243
II.—Establishment	19,09,093	19,22,856	2,843	...	2,325	838
III.—Tools and plant	9,43,906	8,92,469	36,788	14,469	23,493	13,390
IV.—Suspense accounts	...	...	...	...	...	...
Loss by exchange	67,799	54,800	...	...	...	...
Total	83,31,799	82,53,307	55,523	14,469	36,965	19,361
Less receipts on capital account	38,001	90,793	...	...	786	(—) 786
Net total	83,16,798	82,32,514	55,323	14,469	36,197	20,135

All charges under the head of Imperial Capital account, Midnapore Canal, were stopped by order of the Government of India, and the expenditure under this head during the year was debited to Irrigation and Navigation works for which capital and revenue accounts are kept. The outlay from Provincial funds which commenced from the year 1890-91 is shown separately in the foregoing statement. The expenditure during the year 1891-92 was Rs. 14,469, being on tools and plant only.

The subheads of expenditure chargeable to working expenses are compared with those of the previous year in the following statement:—

		1891-92.	1890-91.
		Ra.	Ra.
IB.—	{ Maintenance and repairs ...	1,38,218	1,01,935
	{ Charges for Government steamers, &c. ...	3,044	3,103
II.—	Establishment ...	64,301	70,082
III.—	Tools and plant ...	51,761	23,929
	Total ..	2,57,324	1,99,049

The increased expenditure of the year under review is attributable to extraordinary expenditure on silt clearing in the tidal reaches, repairs to dredgers, and caissons for tidal locks. The ordinary expenditure on distributaries was reduced to an average rate of Rs. 36·5 per mile, against Rs. 41 in the previous year.

Rainfall.—The rainfall registered at Midnapore was 55·09, against 57·98 inches of the previous year.

The total area irrigated by the Midnapore canal during the year under review was 83,973 acres, as compared with 81,973 acres of the previous year, showing an increase of 2,000 acres. The water-supply in the river Coasse ran very low during the latter part of November, and some difficulty was experienced in supplying the demands on the distributaries.

27. The following statement shows the balances, assessments, and recoveries of water-rates on the Midnapore canal for the year 1891-92, as compared with those of the four previous years:—

YEAR.	Amount outstanding at commencement of year.	Amount falling due during the year.	Total for recovery.	Cash realizations.	Remitted or written off.	Balance at the end of the year.
	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.
1887-88	59,749	1,02,532	1,53,281	90,837	5,951	66,493
1888-89	56,493	1,23,337	1,79,830	91,616	4,041	84,773
1889-90	84,773	1,17,203	2,01,975	1,16,424	34,907	50,644
1890-91	50,644	1,30,595	1,81,239	1,15,438	834	64,967
1891-92	64,967	1,29,822	1,94,789	1,32,981	2,836	68,972

The decrease in the outstandings at the close of the year is satisfactory.

The assessments show a decrease of Rs. 773 compared with 1890-91, although there was an increase of 2,000 acres in the area irrigated.

28. The following statement shows the navigation earnings of the canal for the past five years:—

YEAR.	Tonnage of boats.	Value of cargo.	Tollage (assessed or earnings).
	Tons.	Ra.	Ra.
1887-88	409,866	1,18,44,844	1,25,723
1888-89	470,806	1,31,70,269	1,47,689
1889-90	463,418	1,45,12,443	1,44,094
1890-91	417,803	1,48,33,391	1,28,050
1891-92	411,802	1,36,66,744	1,25,098

The two tidal reaches of the Midnapore canal from Ulubaria to Bansbaria and from Kultapara to Kantapookur, a distance of 12 miles, and the first three reaches of the same canal from Mohunpore to Balichuck, 12 miles, were

closed for silt clearance and repairs to locks from 1st April to 7th June and from 15th to 29th May 1891 respectively.

The total revenue and working expenses of the Midnapore canal for the past five years are shown in the following statement:—

	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
<i>Receipts.</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Water-rates ...	90,837	91,018	1,16,424	1,15,438	1,32,981
Navigation ...	1,26,574	1,46,700	1,45,358	1,10,830	1,32,572
Miscellaneous ...	18,987	14,019	15,824	10,928	10,147
Total ...	2,34,378	2,51,795	2,77,604	2,37,196	2,81,700
Less refunds of revenue	469	285	131	205	3
Total receipts ...	2,33,925	2,51,510	2,77,423	2,36,991	2,81,697
<i>Working expenses.</i>					
Direct charges ..	2,39,618	2,00,082	2,00,494	1,99,049	2,57,324
Indirect charges ...	10,783	9,742	8,312	9,811	9,002
Total ...	2,50,398	2,09,804	2,08,806	2,08,860	2,66,326
Balance net revenue ...	(—) 16,471	41,706	68,617	28,131	18,371

The decrease of revenue, amounting to Rs. 9,760, is due to the extraordinary expenditure mentioned in paragraph 25 above.

HIJILI TIDAL CANAL.

An extensive remodelling scheme has, for rather more than a year, been in progress on the Hijili Tidal Canal, having for its object the facilitation of navigation by increasing the depth of the canal and the exclusion of silt, the removal of which entailed very heavy annual expenditure and long closures of the canal. The scheme involves the lowering of the canal bed in Ranges I and II; the provision of two new supply sluices, by means of which the silty water will be led to the canal through long feeder channels, in which the silt will be deposited instead of in the canal itself; a cast-iron supply pipe laid on the bed of the Russulpur river, through which the supply for Range II will be drawn from Range III of the Orissa Coast canal, instead of being taken from the silt-laden water of the Russulpur; the construction of a new lock at Kalinagar to replace the old one, which is too small and in a badly chosen situation; and other works of a minor character, designed to assist in scouring and clearing silt from the lock entrances and navigation channels. The construction of the new lock at Kalinagar and of the iron supply pipe across the Russulpore has been postponed, pending the settlement of the difficulties regarding the deterioration of the Russulpur river, which has of late years been rapidly silting up. The deterioration now appears to have ceased, and during the year under review the depth of the river has even slightly increased, owing to the scour caused by the daily flow of the tide into and out of the lately constructed drainage cut at Balliaghya. The other works comprised in the remodelling scheme have been completed, the time occupied in carrying them out having been, on Range I, 12 months and 21 days, and on Range II, 6 months and 18 days.

The outlay of the year was as shown below:—

	Rs.
Works ...	1,44,112
Establishment ...	49,346
Tools and plant. ...	41,470
Total ...	2,34,928
Less receipts on Capital account ...	10
Net total ...	2,34,918

The total expenditure to end of 1891-92 was Rs. 4,37,216.

The traffic on the Hijili Tidal Canal for the past five years is shown in the following statement:—

YEAR.	Tonnage of boats.	Value of cargo.	Tollage (assessed or earnings).
	Tons.	Rs.	Rs.
1887-88	124,903	27,03,307	40,047
1888-89	166,635	33,01,133	55,420
1889-90	124,606	27,29,720	39,459
1890-91	91,114	20,78,972	26,810
1891-92	133,576	34,97,726	37,287

The traffic during the year compares favourably with that of the previous year, there being an increase in all items over the year before. The canal was closed from 1st April to 24th July 1891.

The following statement shows the receipts, working expenses, and net revenue of this canal for the past five years:—

	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
<i>Receipts.</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Navigation	40,408	63,910	40,398	27,145	36,949
Miscellaneous	1,452	1,260	1,614	869	567
Total	41,858	65,170	41,962	28,044	36,915
Less refunds of revenue ... ..	...	73	...	...	...
Total receipts	41,858	65,097	41,962	28,044	36,915
<i>Working expenses.</i>					
Direct charges	64,865	75,273	26,715	61,968	48,669
Indirect charges	2,081	2,567	1,007	1,606	2,014
Total	66,946	78,040	26,722	63,574	50,683
Balance net revenue	(-)25,118	(-)22,943	15,230	(-)25,530	(-)13,768

ORISSA COAST CANAL.

The capital outlay (direct charges) on this canal for and to end of 1891-92, compared with the sanctioned estimate, is shown in the following statement:—

PARTICULARS.	Amount of revised estimate.	EXPENDITURE.	
		1891-92.	Total to end of 1891-92.
<i>Direct charges.</i>	Rs.	Rs.	Rs.
I.—Works	33,86,609	(-) 1,539	32,72,609
II.—Establishment	7,30,203	(-) 467	7,30,377
III.—Tools and plant	2,24,061	...	2,03,474
IV.—Suspense accounts ... ..	...	6,346	36,833
Total	43,46,873	3,940	42,42,292
Less receipts on capital account ... ..	...	...	3,203
Total	43,46,873	3,940	42,15,990

The canal was opened throughout its entire length of 97½ miles. The tank gháts at the locks were finished, and Mr. Bond's house at Balasore, which was purchased last year for the Executive Engineer's office and residence, was thoroughly repaired. Additional accommodation has also been provided in a detached building, which, together with the cost of land and special repairs and alterations sanctioned in Bengal Government No. 534I, dated 26th March 1891, amounts to Rs. 9,426. The project for a new lock at Jamcoonda, necessitated by changes in the Subarnarekha river, is under consideration.

The traffic on the canal during the year 1891-92, compared with that of the previous year, is shown in the following statement:—

	Tonnage of boats.		Value of cargo.		Tollage (assessed or earnings).	
	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.
	Tons.	Tons.	Rs.	Rs.	Rs.	Rs.
Orissa Coast canal	120,527	110,887	27,05,654	22,27,281	63,715	50,105

There was no closure of the canal during the year. The falling off in tollage was due to the Balliaghye branch canal taking away traffic from Range III during the rainy season, and to the free return passages given to boats on Ranges IVA, IVB, and V as an experimental measure to popularize the canal route.

The following statement shows the receipts and working expenses of the canal for the past five years:—

	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
<i>Receipts.</i>	Ra.	Ra.	Ra.	Ra.	Ra.
Navigation ...	62,828	65,010	63,724	64,220	60,061
Miscellaneous ...	1,026	1,418	1,624	1,410	2,072
Total ...	63,854	66,428	65,348	65,630	62,123
Less refunds of revenue	17	264	15	44	68
Total receipts ...	63,837	66,174	65,333	65,586	62,057
<i>Working expenses.</i>					
Direct charges ...	80,868	74,568	68,011	73,766	75,296
Indirect charges ...	2,639	2,450	976	3,083	3,263
Total ...	83,507	77,018	68,986	76,798	78,549
Balance net revenue ...	(—) 29,670	(—) 10,844	(—) 3,653	(—) 11,212	(—) 16,492

CALCUTTA AND EASTERN CANALS.

The capital account (direct charges) of these canals for and to end of 1891-92 is shown in the following statement:—

	Outlay during 1891-92.	Outlay to end of 1891-92.
	Ra.	Ra.
Direct charges—		
Old outlay	...	24,91,012
I.—Works	53	20,36,808
II.—Establishment	18	3,84,988
III.—Tools and plant	...	3,61,663
IV.—Profit and loss	...	847
V.—Suspense accounts	(—) 387	11,692
Total	(—) 316	52,77,010
VI.—Less receipts on capital account	10,013	64,467
Total charges	(—) 10,329	52,22,543

Under the above head no works of any importance were carried out during the year.

The following statement shows the receipts and working expenses of the canals for the past five years:—

	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
<i>Receipts.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
Navigation	5,74,766	5,69,692	4,87,863	5,19,065	5,15,126
Miscellaneous	5,168	6,552	7,768	6,081	10,218
Total	5,79,934	5,76,144	4,95,631	5,25,146	5,25,343
Less refunds of revenue ... ..	...	19	78	61	124
Total receipts	5,79,934	5,76,125	4,95,553	5,25,085	5,25,219
<i>Working expenses.</i>					
Direct charges	2,12,312	2,81,949	2,68,565	3,08,623	3,28,403
Indirect charges	12,344	11,859	12,166	14,331	14,996
Total	2,24,656	2,93,801	2,79,133	3,23,957	3,43,399
Balance net revenue	3,55,278	2,81,324	2,16,410	2,01,128	1,81,820

The construction of the iron girder bridge over Tolly's Nala at Kalighat was completed during the year under review. At Chitpur a wooden verandah in front of the toll-house was constructed, and a screen erected in front of the house of the Supervisor of the Calcutta Canals.

The traffic on the canals during the year 1891-92 compared with that of the previous year is shown in the following statement:—

	Tonnage of boats.		Value of cargo.		Tonnage (assessed or earnings).	
	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.
	Tons.	Tons.	Rs.	Rs.	Pcs.	Rs.
Calcutta and Eastern Canals } Tolly's Nala	2,600,990	2,565,259	6,27,91,800	7,13,62,376	5,14,744	5,70,181

The falling off in traffic is attributable to railway competition.

For silt clearance and repairs on the Eastern Canals the Bhangore khal was closed from 5th February to 1st March, and the Assasuni khal from 10th February to 2nd June, and on the Calcutta canals the Dhappa lock was closed from 15th April to 20th May.

NADIA RIVERS.

The receipts and working expenses of these rivers for the past five years are shown in the following statement:—

	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
<i>Receipts.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
Navigation	1,98,918	1,91,749	1,85,382	2,00,608	1,92,718
Miscellaneous	367	130	61	136	247
Total	1,98,675	1,91,888	1,86,043	2,00,644	1,92,965
Less refunds of revenue ... ..	...	...	220	162	228
Total receipts	1,98,675	1,91,888	1,85,823	2,00,482	1,92,737
<i>Working expenses.</i>					
Direct charges	92,022	1,34,694	87,694	1,03,537	1,06,867
Indirect charges ... ..	...	8,075	5,336	6,357	6,417
Total	92,022	1,40,769	93,030	1,09,894	1,13,284
Balance net revenue	1,06,653	51,119	92,793	90,588	79,453

The anticipated revenue from the Nadia rivers was Rs. 1,88,000, but the actuals amounted to Rs. 1,92,965. The expenditure under working expenses was Rs. 1,06,857 against the revised estimate of Rs. 97,778.

The traffic on the Nadia rivers during the year 1891-92 and that of the previous year are shown in the following statement:—

	Tonnage of boats.		Value of cargo.		Tollage (advanced or earnings).	
	1890-91.	1891-92.	1890-91.	1891-92.	1890-91.	1891-92.
	Tons.	Tons.	Rs.	Rs.	Rs.	Rs.
Nadia rivers	8,90,210	8,01,061	4,01,19,112	3,78,16,901	2,09,608	1,09,718

The decrease in tollage is due to the low level of the Ganges, owing to which the navigation channels closed earlier than usual.

EDEN CANAL.

During the year under review the total outlay on this canal amounted to Rs. 25,663, against Rs. 34,795 of the previous year. The following is a comparative statement by sub-heads of the expenditure:—

SUB-HEAD.		1891-92.	1890-91
		Rs.	Rs.
Works	...	4	584
Maintenance and repairs	...	18,623	24,612
Establishment,	...	6,541	8,915
Tools and plant	...	495	684
Total	...	25,663	34,795

The supply of water to the Burdwan water-works was efficiently maintained throughout the year. The irrigation operations of the canal during the year were very satisfactory, as compared with those of the two preceding years. The receipts from water-rates, which are levied at the rate of 4 annas a local bigha, amounted to Rs. 9,430, against Rs. 2,795 of the year before. The bulk of the irrigation was carried out from October to the middle of November 1891, when there was no rainfall. For the first time since irrigation from the Eden canal was commenced, five-year leases have been enforced, under which 36,436 bighas of land were leased out in the Burdwan district and 1,687 bighas in the Hooghly district. The development of the Eden canal irrigation depends on the extension and improvement of the main distributaries, which, as they exist, are in a very inefficient condition.

AGRICULTURAL WORKS.

DRAINAGE.

The construction of the Srirampur sluice, which was commenced in December 1890, was completed in 1st August 1891. The total cost of the work, including silt clearance of the khal, amounts to Rs. 37,954. A scheme for draining the tract of country between the Midnapore canal and the Dainan khal was sanctioned by Government during the year. The estimated cost of the project is Rs. 63,921, and the expenditure to end of 1891-92 was Rs. 33,904.

The Balliaghoe drainage project works were stopped by the order of Government conveyed in its No. 81F of the 21st January 1892. At the time the main drain was completed to full section, and the branch canal to Balliaghoe bazar was completed to a section somewhat reduced from that originally intended. The immediate results, as regards deepening the Russulpore river and draining the tract of the country known as the Burrachowka Julla and that lying to the west of the Argowal circuit embankment, have been good, but the permanency of the improvement is of course doubtful.

GOVERNMENT EMBANKMENTS.

All the embankments in the South-Western Circle were maintained in good order. To the Bhagirathi embankments extensive repairs were carried out in the Murshidabad district before the rains, and an artificial berm 7 feet below crest level and 10 feet broad constructed, and side cuttings in rear of embankments filled up. The embankment, which was threatened last year at Mohulla on the 23rd mile, was carried away on the 14th August 1891, when the gauge at Borhampore read 23' 6", about 1,000 feet being destroyed by the 18th August. An estimate, amounting to Rs. 26,830, was sanctioned for the Soojapore retired line, of which about one-third was completed before the close of the year. During the floods of June 1890, the zamindari embankment at Lakra on the right bank of the Damodar was breached and Lakra village completely washed away. It was consequently decided in December 1890 that all existing embankments between Bangacha opposite Sadar Ghát to Begua should be removed, and all existing deep breaches, such as Janculi, Lakra, Bangacha, &c., filled up with earth to ground level. Agreeably to this decision $3\frac{1}{2}$ miles out of $63\frac{1}{2}$ miles of the D schedule embankments, $1\frac{1}{2}$ miles of takávi embankments and $3\frac{1}{2}$ miles of zamindari embankments, in all 8 miles, were cut away and abandoned during the year under review at a cost of Rs. 19,097, leaving 150 feet out of every 650 feet as refuge mounds, and all the existing breaches in them were closed. The breach at Lakra was closed by strong spurs, earth being found insufficient.

TAKÁVI EMBANKMENTS.

The takávi embankments under contract are entirely in the Midnapore district. The total outlay during the year was Rs. 26,291, against Rs. 24,165 of the previous year.

The following are the agricultural works constructed from loan funds under the provisions of the Drainage Act:—

HOWRAH DRAINAGE WORKS.

These works were maintained in efficient order throughout the year. The crops in the Jullah yielded a fair return, and there was no complaint of any damage to crops or imperfect drainage. The cost of maintenance, including establishment charges, was Rs. 1,214.

DANGUNI DRAINAGE WORKS.

Were also maintained in very good order. The sluices worked successfully, and no remarks are called for. The cost during the year, including all charges, was Rs. 1,527.

MEDARIA KHAL EMBANKMENTS.

These embankments, which were taken over by Government from the zamindars in 1886 and remodelled in subsequent years, were maintained at the cost of zamindars in an efficient state.

CHURRIAL KHAL DRAINAGE.

The re-excavation of this khal and the construction of a regulator at the upper end of the channel at Hanspukhur, and other minor works in connection with the scheme, were completed in the previous year. By this work, the cultivation of 134 villages, covering an area of 31 square miles, which suffered more or less almost every year from accumulations of rain-water on the land for want of a proper drainage outlet, have been improved. Rupees 572 were expended on maintenance during the year.

RAJAPUR DRAINAGE WORKS.

The area drained by this scheme is 227 square miles, and the area reclaimed and improved is $38\frac{1}{2}$ miles. The scheme has proved very successful, and all waste and low lands in the swamp have been fully brought under cultivation. The abutments of bridge No. 2 on the Howrah and Amta road

over the main channel, which settled unequally and in consequence of which some of the arches cracked, of which mention was made in last year's report, were repaired during the year. The arches were dismantled and their reconstruction undertaken at a cost of Rs. 7,245.

BURBOJULLA DRAINAGE SCHEME.

The excavation of 2 miles of main channel and $7\frac{1}{2}$ miles of branch channel, the construction of a 4-vent outlet sluice at the mouth of the main channel at Sarunga and other minor works which were comprised in the above scheme, were all completed in September 1891. The total area drained by the sluice and channels is $30\frac{1}{2}$ square miles, and the area reclaimed and improved is $15\frac{1}{2}$ square miles. This scheme has proved successful, and all waste and low lands in the swamp have been fully brought under cultivation. During the year certain repairs were done to the works after completion of the scheme at a cost of Rs. 888.

SONE CIRCLE.

On the 1st March 1892 the Deputy Collector in charge of the collection of water-rates in Shahabad assumed control over the collections in the Patna and Gaya districts also, the appointment being termed the Revenue Division, Sone Canals.

No works under famine relief and insurance have been done under the Public Works Department during the year. The estimates of the Saranwan Pyne in the Gaya district, alluded to in last year's report, have been completed, and the line of the proposed pyne has been marked out. A plan and estimate have also been prepared for improving the outfall for flood water below the Kao aqueduct in the Shahabad district on the main western canal. This would form a useful relief work in case of necessity.

The expenditure in the Sone Circle during the year 1891-92, compared with that of the previous year, is shown in the following statement:—

PARTICULARS.	1891-92.	1890-91.
	Rs.	Rs.
MAJOR IRRIGATION WORKS.		
<i>Capital expenditure not charged against revenue (direct charges).</i>		
Sone canals (Imperial)	2,04,098	1,71,961
<i>Working expenses (direct charges).</i>		
Sone canals (Provincial)	6,48,000	6,53,286
MINOR WORKS AND NAVIGATION.		
<i>Provincial.</i>		
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.		
Saran canals (Capital account) ... ..	...	...
Ditto (Revenue account)	12,539	38,881
WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.		
Madhubani canal	10,506	11,827
<i>Agricultural works.</i>		
Saran takávi embankments under contract	31,038	17,348
Tirhut ditto ditto	9,893	18,506
Champaran ditto ditto	63,375	68,640
Village channels, Sone canals (contribution) ...	4,468	2,030
Sluices in Saran district (contribution) ...	245	776
Total	9,83,621	9,80,645

The Sone canals are practically complete and in full work, and the outlay on capital is now only on subsidiary works such as outlets and culverts for village channels where they cross district roads. A report on the canals as constructed, compared with the estimate the currency of which has expired, has been sent to the Government of India, and the capital account will shortly be closed, the expenditure being meanwhile confined to the completion of works sanctioned before 31st March 1891. The outlay charged to the capital account of the Sone canals during the year 1891-92, which is held to be

irregular pending orders of the Government of India, compared with that of the previous year, is shown in detail in the following statement:—

	1891-92.	1890-91.
	Rs.	Rs.
I.—Works—		
(1) Head-works ...	2,035	5,219
(2) Main canal and branches ...	31,337	23,475
(3) Distributaries ...	79,312	38,947
(4) Drainage and protective works ...	57,728	65,028
Total works ...	1,70,412	1,32,699
II.—Establishment ...	37,083	19,850
III.—Tools and plant ...	(—) 1,352	6,411
IV.—Suspense accounts ...	(—) 1,715	14,716
GRAND TOTAL ...	2,04,428	1,73,676
V.—Less receipts on capital account ...	330	2,415
Net total ...	2,04,098	1,71,361

The work done during the year under review is as follows:—

Head works.—The plantations established on the spare lands belonging to Government at Dehri were proceeded with, and will probably be completed during 1892-93.

Eastern Main Canal.—The escape for the Manora distributary was completed. The protective embankment to save Kharati village from the flood of the Poonpoo was proceeded with, as were permanent outlets and road crossings for village channels on the Manora distributary.

Patna Canal.—The addition to the second weir on this canal was completed before the rains. Three drainage culverts and one hundred and thirty-three permanent outlets were completed during the year, and a rest-house on the Khojhasa distributary and the Bharatpur distributary escape were proceeded with.

Main western canal series.

Permanent outlets, cattle bridges, crossings, for village channels, and syphon culverts for drainage and drainage cuts were under construction in most of the canals, branch canals and distributaries under the main western canal series. On the Arrah Canal eight small regulators in distributaries and on the Buxar Canal some inlets for drainage were built. The alteration of three bridges on the Biffia branch canal and quay walls at Nokha and Buxar were in progress. Escapes from the Rajpur and Nagpur distributaries were in progress, as also were a rest-house on the Sianwank distributary, a toll office at Nokha and zilladar's quarters at Sikraol. The Kujee drainage cut, which is an important work, the estimated cost being Rs. 37,947, was proceeded with, and was nearly completed at the end of the year. The extension of the Basudhar distributary was nearly completed, as were some additional lengths of parallel channels.

The following statement shows the lengths of canals, branch canals, distributaries, Government village channels in operation at the close of the year 1891-92:—

Division.	MILES OF NAVIGABLE CANAL.			MILES OF BRANCH CANAL.			MILES OF DISTRIBUTARIES.			MILES OF GOVERNMENT VILLAGE CHANNELS.			REMARKS.
	Completed at the commencement of the year.	Completed during the year.	Total.	Completed at the commencement of the year.	Completed during the year.	Total.	Completed at the commencement of the year.	Completed during the year.	Total.	Completed at the commencement of the year.	Completed during the year.	Total.	
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	
Eastern Sonu ...	80½	...	80½	598	—7½	590½	* The Patnaipore distributaries abandoned beyond 12th mile. † In progress, but from which water can be given.
Arrah ...	65½	...	65½	71½	...	71½	400	...	400	...	...	...
In hot workshops...	7½	...	7½	...	...	...	30½	15½	46½	94½	...	...
Buxar ...	87½	...	87½	77½	...	77½	...	...	...	...	...	...
Total ...	210½	...	210½	148½	...	148½	1,393½	8	1,401½	94½	4	98½	

The area irrigated during the year 1891-92, compared with that of the preceding year, is shown in the following statement:—

YEAR.	Kharif.	Rabi.	Sugarcane.	Five-years' lewes.	Hot-weather crops.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1890-91	32,489	20,632	4,023	22,556	9,325	281,014
1891-92	44,103	127,390	1,196	23,791	12,325	474,723

The increase is marked, being 193,700 acres, principally under "rabi," above the area irrigated in 1890-91.

The rainfall in the autumn of 1891 was very scanty, and this led to a great demand for water both for kharif and rabi. As regards the latter, the increased demand is most noticeable in the Buxar Division, where the area irrigated under this head has risen from 17,034 acres in 1890-91 to 127,390 acres in 1891-92. The largest area of rabi irrigated in any previous year was, in the whole Circle, 124,812 acres in 1877-78. In no other year has the area risen above 90,304, of which 48,961 acres were in the Buxar Division. This occurred in 1883-84.

The rainfall registered during the year and the preceding one was as under:—

	1891-92.	1890-91.
	Inches.	Inches.
Arrah Division, five stations	27.34	54.52
Buxar ditto, four ditto	22.29	44.75
Eastern Sone Division, three stations	29.57	56.00

The expenditure on maintenance of the works of the Sone canals (direct charges) during the year 1891-92, compared with that of the previous year, is shown below:—

	1891-92.	1890-91.
	Ra.	Ra.
IA.— Extensions and improvements	3,812	3,263
IB.— { Maintenance and repairs	2,58,649	2,72,663
Transport service	1,155	—
IC.— Compensation	28	168
II.— Establishment	3,55,573	3,48,665
III.— Tools and plant	28,843	28,527
Total	6,48,060	6,53,286

A drainage sluice in the Kao river embankment at Dumraon was built, the alteration of the bridges on the Gurra Chowbey branch canal from wooden tops to arches was proceeded with, and a few small culverts were built. The eastern main series of canals were closed for repairs from 6th April to 29th May 1891, and from 28th March 1892 to the end of the year. There was no closure of the western main series in 1891-92. These canals were closed in March 1891, and not again till May 1892.

The progress made in the collection of water-rates on the Sone canals during the past five years is shown in the following statement:—

YEAR.	Amount outstanding at commencement of the year.	Amount falling due during the year.	Total for recovery.	Cash realizations.	Remitted or written off.	Balance at end of the year.
	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.
1887-88	2,31,582	7,25,810	9,57,392	6,19,586	26,625	4,11,281
1888-89	4,11,281	7,63,217	11,64,498	7,69,553	24,329	3,80,613
1889-90	3,80,613	7,62,788	11,33,401	8,16,304	36,225	2,81,782
1890-91	2,81,782	8,30,124	9,10,906	6,44,718	21,400	2,44,728
1891-92	2,44,728	7,81,262	10,26,990	8,11,760	15,220	1,99,010

Compared with 1890-91, the assessments and cash realizations show an increase of Rs. 1,52,128 and Rs. 1,67,032 respectively, while there has been a decrease of Rs. 6,240 and Rs. 45,718, respectively, in the sum remitted and the balance at the end of the year.

The traffic on the Sone canals during the past five years is shown in the following statement:—

Year.	Tonnage of boats.	Value of cargo.	Tollage (assessed or earnings).
	Tons.	Rs.	Rs.
1887-88	95,072	56,80,503	51,542
1888-89	106,708	58,04,020	52,412
1889-90	104,380	49,38,364	50,342
1890-91	114,990	65,25,714	55,754
1891-92	120,147	70,06,593	57,291

The revenue account of the Sone canals during the past five years is given below:—

	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Receipts.</i>					
Water-rates	5,19,586	7,59,555	8,16,374	6,44,718	8,11,760
Navigation	55,904	57,829	57,759	55,409	66,517
Miscellaneous	24,459	26,604	23,342	26,128	31,827
Total	6,00,949	8,43,889	8,97,495	7,36,475	9,10,084
Less refunds of revenue	15,331	12,611	16,520	7,503	4,920
Total receipts	5,88,618	8,31,278	8,80,975	7,29,170	9,06,074
<i>Working expenses.</i>					
Direct charges	7,31,970	7,43,619	6,80,950	6,53,280	6,48,000
Indirect charges	50,369	51,813	48,071	48,813	49,780
Total charges	7,82,339	7,95,432	7,29,020	7,02,093	6,97,780
Balance net revenue	(—) 1,63,730	36,846	1,51,015	27,071	2,08,294

The increase in receipts during 1891-92 was due partly to the greatly increased area of rabi irrigation, which occurred mainly in the Buxar Division, and was the result of a deficient rainfall, but mainly to extensive recoveries of arrears in the Patna district.

MINOR WORKS AND NAVIGATION.

The only works coming under this head for which capital and revenue accounts are kept in the Sone Circle are the Saran canals, and no original works in connection with those canals were executed during the year.

The revenue account of the Saran canals from and to end of the year 1891-92 is given below:—

HEADS OF ACCOUNT.	RECEIPTS—		HEADS OF ACCOUNT.	CHARGES—	
	During 1891-92.	To end of 1891-92.		During 1891-92.	To end of 1891-92.
	Rs.	Rs.		Rs.	Rs.
Water-rates	15,785	2,27,749	Maintenance and repairs	9,021	2,53,169
Miscellaneous and other receipts	48	8,093	Establishment	3,710	81,803
			Tools and plant	(—) 193	(—) 5,644
			Total	12,538	3,29,328
			Indirect charges	519	11,897
			Total charges	13,057	3,41,225
			Balance net revenue	2,774	(—) 1,12,937
Total	15,831	2,35,842	Total	15,831	3,53,165

